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Teachers' Understanding of Components of Response to Intervention (RTI) in Pennsylvania

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TEACHERS' UNDERSTANDING OF COMPONENTS OF RESPONSE TO INTERVENTION (RTI) IN PENNSYLVANIA

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Dissertation Approval

This is to certify that the thesis presented to us by **Gabrielle Wilcox** on the **21st** day of **May, 2009,** in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

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Abstract

Since recent regulations allow the use of response to intervention (RTI) for specific learning disability determination, many districts have implemented RTI. This study surveyed a stratified random sample of 2,000 teachers in Pennsylvania with 141 usable responses. The purpose of this study was to ascertain teacher understanding of components of RTI in districts using and not using RTI and to determine if district implementation procedures impacted perceived effectiveness. Overall, the groups were similar in understanding and perceived importance of RTI components; however, there were small but notable differences. Respondents with higher levels of perceived effectiveness indicated greater support from a variety of personnel. The results suggest that teachers require additional training and support in understanding and applying components of RTI.

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Chapter 1

Introduction

Statement of the Problem

Educators are faced with significant legislative mandates to improve the academic skills of students (Broadman, Argüelles, Vaugh, Hughes, & Klinger, 2005). Teachers recognize the importance of this, but determining how to remediate these difficulties is frequently an elusive goal. Although some research suggests that 95% of students may reach satisfactory levels of performance through adequate instruction, at least in reading, the standards of accountability require the field to enable the other 5% to attain that level of competence as well (Knuston, Simmons, Good, & McDonagh, 2004). Currently, teachers typically prefer using informal methods largely based upon professional perceptions to determine a student's skill deficits, to choose interventions to address those weaknesses, and to monitor the progress made in those areas; these methods are chosen, rather than more objective measures. Unfortunately, these practices often result in overrating student performance, especially when measuring progress toward goals, ultimately resulting in inadequate student performances (Fuchs, Fuchs, & Stecker, 1989).

The No Child Left Behind Act of 2001 (NCLB) was authorized in an attempt to ensure that systems effectively meet the needs of all students, holding these systems responsible to the taxpayers who fund education and to the students themselves (Paige, 2006). This regulation has established an ambitious goal, requiring 100% of students to attain proficiency on statewide assessments in the areas of reading, language arts, math, and science by 2014, adding to the sense of urgency for schools to address the learning needs of all students. The enactment of this legislation also signifies a transition from the mandate to provide all students with an education, including those with learning

disabilities, to ensuring improved outcomes for all students; this is essentially, merging regular education with special education (Stollar, Poth, Curtis, & Cohen, 2006).

The Individuals with Disabilities Education Improvement Act of 2004 (IDEIA), another recent piece of legislation directly regulating education, modified the process for the identification of Specific Learning Disabilities (SLD), allowing for the use of a Response to Intervention (RTI) model, because of concerns related to the shortcomings of the ability-achievement discrepancy model. Some concerns related to the implementation of the ability-discrepancy model include the inconsistency in computation procedures, the length of time young students must often wait before their discrepancy is larger enough to qualify for specially designed instruction (Fuchs & Fuchs, 2006), over-identification of SLD (Burns, Dean, & Klar, 2004), and bias in identification (Marston, Muyskens, Lau, & Canter, 2003).

Not all researchers, however, agree that the achievement-discrepancy model itself is the cause of these problems. Some contend that these problems are a result of misapplication of the concept of severe discrepancy rather than the result of inherent characteristics of the model (Kavale & Spaulding, 2008; Willis & Dumont, 2006). Furthermore, a recent examination of how states are implementing RTI indicates that there is significant variability in how it is being applied, which is a criticism of the discrepancy model (Berkeley et al., 2009). Adoption of the RTI model by districts, to replace the ability achievement discrepancy model, requires regular education teachers to take a more active role in the intervention process prior to referral, expecting them to implement evidence-based teaching practices, monitor student progress, and employ evidence-based interventions with integrity. Considering these new, often demanding,

requirements for regular education teachers, it is vital to examine teachers' theoretical understanding and practical knowledge of the underpinnings of RTI.

Purpose of the Study

The primary purpose of this study was not only to survey teacher understanding of the components of RTI, including their perceptions of how their schools systemically prepared for the change, but also their perceptions of the effectiveness of RTI in improving outcomes for students. Given the fact that teachers are the primary implementers of many components of the RTI process, their understanding of and acceptance of these processes are necessary for successful application of this model.

The methodology for collecting this information included a survey designed to elicit teacher comprehension of the processes employed in the RTI model, the process of systemic change in implementing RTI, and perceptions of the usefulness of the model. Response to a web-based survey was solicited via email to a stratified, random sample of elementary school teachers in the state of Pennsylvania.

This research attempted to determine if teachers in districts implementing RTI for the purpose of discovering special education eligibility have a deeper knowledge base and proficiency in employing the components of RTI than do teachers in schools not using RTI. Second, this study attempted to ascertain if teachers perceived their schools or districts as being systematic in implementing RTI and involving school personnel in the process. Finally, this study will attempt to determine teachers' beliefs about the benefit of using RTI.

Chapter 2

Literature Review

Systemic Change

Regulatory requirements such as IDEIA and NCLB have resulted in calls for education reform and accountability, including promotion of school-wide reforms; unfortunately, adequate attention has not been paid to the mechanisms necessary to produce the desired changes. Multiple obstacles interfere with the implementation of reforms in public schools. For example, student performances on statewide achievement tests is frequently the primary, if not the sole, measure of success; its focus is on short-term gains rather than long-term systemic change and is a contributing factor in the failure of school reforms (Adelman & Taylor, 2007; Curtis, Castillo, & Cohen, 2008). An analysis of school improvement plans revealed that, currently, these plans generally do not delineate the process that will be used to execute the system-level change. Another finding from this analysis was that those responsible for initiating the changes often have received little training in the process of systemic change, decreasing the success of these initiatives. A further impediment to the success of systemic change through school reform includes the scarcity of research in examining efficient models for the diffusion of change. Reform efforts are further marginalized by the pervasive attitude that new systems will end when the funding is terminated, and finally, schools often fail to invest in the process of sharing and creating knowledge among school personnel, an attribute necessary to sustain change (Adelman & Taylor, 2007; Fullan, 2002).

Evidence-based interventions are useful tools in improving student performance, but school reform requires more than evidence-based interventions; it requires systems

that have developed the necessary infrastructure to institutionalize the reform across schools, adequately and equitably. The ability to institutionalize reform is founded on the skill of the system in assessing the readiness of its members to change, taking into account the extent of the disparity between the baseline status and the ultimate goal (Adelman & Taylor, 2007). This begins with acknowledging the readiness of members to change and involving stakeholders, including teachers, staff, parents, and sometimes students, in meaningful ways throughout the process of change (Curtis, Castillo, & Cohen, 2008). Beyond this, systemic change requires a clear statement of the rationale for the change including benefits of the proposed change and a commitment to allocate resources, including finances, space, equipment, and personnel, needed to implement the change over time. Effective system-level change also requires the organization to identify the phases of change and the major tasks of each phase, ensuring the existence of an infrastructure capable of carrying out all of the tasks (Adelman & Taylor, 2007).

Several systems for initiating systemic change in schools have been suggested, including collaborative strategic planning (CSP) and continuous system level assessment, systems that share several features. The first step requires the clear identification of the problem. Both models emphasize the importance of devoting adequate time in this step in order to achieve the ultimate result of system-level change. Identifying the problem requires data collection to ascertain the current level of performance, which is compared with the ultimate goal, providing an estimation of the gap between the status quo and the goal. That information is used to develop interventions to remedy the problem, which is based upon the hypotheses for the causes of the underlying problems. The chosen interventions are then implemented and monitored both for fidelity of implementation

and for outcomes on student performance. Both models emphasize the fluidity of the process and the need to revisit earlier stages, focusing on deficits in implementing the process, if desired outcomes are not attained, (Smith & Freeman, 2002; Stollar et al., 2006).

Effective systems-level change necessarily includes a process to train teachers and support staff in implementing the interventions in classrooms, providing readily accessible support, especially during the initial stages of implementation, through coaches, mentors, and an on-site monitor who examines current needs in light of the long-term goals of the initiative (Adelman & Taylor, 2007; Center for Mental Health in Schools, 2008; Curtis, Castillo, & Cohen, 2008).

Response to Intervention (RTI)

The response to intervention (RTI) model, affirmed in the Individuals with Disabilities Act of 2004 (IDEIA), provides an alternative to the ability-achievement discrepancy model for identifying students with Learning Disabilities, which has been described as a wait- to- fail model because of the level of discrepancy required (VanDerHeyden & Jimerson, 2005). Although others espouse the idea that RTI is still experimental, there is no one accepted model, and there are inconsistent results across age levels and across individuals' performances (Kavale & Spaulding, 2008). A foundational concept of RTI is that interventions lie on a continuum of potency, allowing practitioners to systematically and sequentially alter instruction until a successful intervention is found (Daly, Persampieri, McCurdy, & Gortmaker, 2005). Additionally, it incorporates an ecological approach to evaluation, placing more emphasis on external

factors, primarily quality of instruction, than on within-child factors, such as a disability (Noell & Gansle, 2006; Reschly, 2008).

The response to intervention model is a systematic process whereby school personnel screen students to identify those who are at-risk of not succeeding academically and providing them with multiple levels of support and intervention. The RTI model conceptualizes services provided to students as tiers, usually three. In this conceptualization, tier one provides preventive service to all students, and so, is considered universal. The second tier provides more targeted interventions to small groups of students at risk for school problems, and the third tier provides intensive individualized interventions for those who continue to struggle; this is the last tier before being referred for Special Education (Pennsylvania Department of Education, 2008; Reschly, 2008).

Although using the RTI model as a means of identifying students with a Specific Learning Disorder is relatively new, the concept of implementing individualized interventions prior to referral for Special Education using a problem-solving model is not new; it is a common component of RTI across implementation practices (Burns, Peters, & Noell, 2008). Several initiatives, including Instructional Support Teams (IST), which were used in Pennsylvania, have incorporated this process. Additionally, adequate instruction prior to Special Education placement has always been a requirement (Anonymous, 2005; Willis & Dumont, 2006).

The two main models for implementing RTI are the standard protocol, which provides standard treatments for fixed intervals of time, and the problem-solving approach, which implements the problem-solving process individually, for each student

at each level (Fuchs & Fuchs, 2006). Although Pennsylvania state regulations do not indicate which model should be used, the guidelines which are issued refer to the use of standard-protocol interventions and programs (Pennsylvania Department of Education). An underlying theme of RTI is the idea that school personnel cannot assume that the regular education curriculum is effective or research-based, underscoring the need for school districts to ensure that effective instruction has been provided universally prior to pursuing identification for Special Education, which is Tier 1 (Kovaleski, 2007) prior to moving to Tier 2.

The Pennsylvania guidelines for identifying SLD include both inclusionary and exclusionary criteria. The exclusionary factors require districts to ensure that inadequate achievement is not caused by lack of instruction or other problems such as vision impairment or limited English proficiency. The inclusionary factors require the student to perform below state benchmarks, regardless of the ability level, and either to demonstrate an ability-achievement discrepancy or to demonstrate an inadequate rate of improvement based upon the RTI model. Individual districts set the benchmarks for adequate rates of improvement. Consequently, Pennsylvania does not mandate that districts use RTI to make eligibility decisions, but it does "mandate that many of the essential features of RtI implementation be provided to all students and documented during the multidisciplinary evaluation process." (Pennsylvania Department of Education, 2008, p. 19).

All three tiers of this model are under the umbrella of regular education but become more individualized and intensive as the student progresses through the tiers. In Pennsylvania's model, Tier 1 requires that districts use curriculum aligned with state standards and provide differentiated instruction to all students at this universal level. Tier

I includes universal screening, a process which involves testing all students in a grade or a building to determine if core curriculum or instructional changes need to be made and to determine if individual students require extra support. Universal screening is preventative, providing s litmus test for the health of the system. For example, if large numbers of students in a grade or a class are not meeting expected benchmark levels, there is likely a problem with the interaction between the students and the curriculum rather than a problem of student-centered deficits. Consequently, the screening measures used must relate directly to the curriculum, or the data will not accurately represent health of the instruction in the building. Curriculum-based measures, such as Dynamic Indicators of Basic Early Literacy Skills (DIBELS), are the most common tools used as universal screeners; however, no studies have validated any measure as a proven universal screener (Ikeda, Neessen, & Witt, 2008).

Students identified as being at- risk through screening processes receive supplemental interventions in small groups using a standard protocol, which is Tier 2. For those who are significantly below the benchmark or who do not make adequate rates of progress in Tier 2, the standard protocol is still used but intensive interventions are provided in Tier 3 and by receiving standard protocol instructional programs. If students do not demonstrate adequate rates of improvement after Tier 3, they are referred for an evaluation for Special Education, which involves evaluating the information collected through progress monitoring at each Tier (Pennsylvania Department of Education, 2008).

One challenge of implementing RTI is that most of the research conducted has focused on reading at the elementary school level, specifically in primary grades, with little information about how it should be modified for effective implementation at the

middle and high school levels and across content areas (Mastropieri & Scruggs, 2005). There is also a lack of clarity about who within the schools who holds primary responsibility for implementing research-based interventions with integrity. Although Mastropieri & Scruggs (2005) assert that regular education teachers are responsible for implementing interventions because they are responsible for providing instruction, Kovaleski (2007) maintains that principals hold the responsibility because it is a school-wide initiative and research-based instruction is a requirement of NCLB.

There are several questions about the implementation of RTI that are not yet fully understood, including what constitutes a research-based intervention, how to translate interventions from research to practice, how interventions should be selected, the appropriate strength of an intervention, how student response will be measured, level of fidelity required in order to evaluate a student's response to the intervention (Noell & Gansle, 2006), and how to differentiate between SLD and other causes of low achievement (Kavale & Spaulding, 2008). These gaps in the model make uniform application of RTI difficult.

Problem-Solving Teams

Ensuring that teachers have access to strong curricula and identifying those teachers who need assistance with instruction in using universal screening tools are not adequate measures to ensure the success of all students. Data analysis teams are needed at Tier 2 to analyze the data from those screenings in order to make informed decisions. Kovaleski & Pederson (2008) recommend that these teams include all of the teachers in a grade level, with a limit of six teachers on a team; they should also include a member who is familiar with the screening assessment and measurement theory, such as a school

psychologist. These meetings include a standard set of procedures. First, the data should be reviewed by the school psychologist and disseminated to the members. During the meeting, the team sets goals for the percentage of students expected to meet proficiency on the identified skills. Next, strategies are generated; however, this should not be a brainstorming session. Instead, the strategies should be identified to fit with the curriculum used. From the list generated, the team should choose which interventions to implement; this is determined by the strength of the research base, the availability of resources needed and ease of implementing the strategies in general education classes. The team creates a plan for ways to implement the chosen strategies, including their frequency and duration. During this step, team members familiar with interventions support those less familiar through peer coaching, modeling, discussions, and information on integrity. Finally, the team supports the implementation of the intervention strategies chosen and identifies students who are not responding and who would benefit from moving on to a problem-solving team, which focuses on individual needs; subsequent meetings are then scheduled.

Problem-solving teams in schools have been used to identify student needs in order to intervene prior to RTI, but little was known about the efficacy of the process used. Burns, Peters, & Noell (2008) found that providing performance feedback to these teams improved the procedural integrity of implementing the problem-solving model. Of the 20 items monitored, nine items were observed 70% of the time or more after receiving feedback, but three items continued to be observed less than 60% of the time. These included writing goals that were objective, empirical, and linked to the problem,

making a plan to monitor effectiveness, and planning ways to measure integrity of implementation.

Peer coaching was used as the model to train teachers in the IST model in Pennsylvania; these were problem-solving teams, using consultants to provide training to teams with on-site demonstration and guided practice. This training focused both on content and on process and mandated the involvement of the Instructional Support Teacher and the principal, allowing participation of any team members (Kovaleski & Glew, 2002).

Theories of Intervention Assessment

The RTI model promotes using a continuum of services; however, it does not offer a system for determining which intervention to use for a specific student or for a particular problem. This is a challenge because as the intensity of interventions increases, including dosage, frequency, and complexity, the level of resources required to deliver the interventions also increase (Ardoin, Witt, Connell, & Koening, 2005; Daly, Martens, Barnett, Witt, & Olson, 2007). Consequently, determining the optimal level of intervention accurately is important; balancing student needs and efficient use of limited district resources is crucial because districts not only have a responsibility to educate students, but they also have that a fiduciary responsibility to the taxpayers who fund them (Detrich, 2008). RTI clearly includes assessing skill deficits, developing interventions that address the deficit at the appropriate level of intensity, conducting frequent progress monitoring, and evaluating progress through single-subject design methodologies (Ardoin, Witt, Connell, & Koenig, 2005); however, it does not espouse a particular

process for deciding how to implement these elements, leaving individual districts to choose a model.

Evidence-based methods for assessing academic deficits and choosing effective interventions have not yet been developed for RTI (Noell, Freeland, & Witt, 2001), but a variety of methodologies have been suggested. In instructional hierarchy (IH), one of the suggested methodologies, the absence of a behavior or the failure to demonstrate a skill is thought to stem either from a lack of skill or choosing to do something other than demonstrate the skill. Skill deficits are remediated through interventions that teach the skill, and performance deficits are reduced by providing incentives that effectively compete with the alternative behavior (Duhon et al., 2004). IH also assesses the student's stage of learning to determine the intervention. For example, in the acquisition stage, modeling, prompting, and error correction may be used; in the fluency stage, drill and practice and rewards may be effective; in the generalization stage, requiring the student to demonstrate the skill across settings, contextualization may be an appropriate intervention. The most advanced stage of learning, adaptation is promoted by creating situations in which the student needs to use problem-solving skills as well as specific academic skills (Daly et al., 2005; VanAuken, Chafouleas, Bradley, & Martens, 2002).

There are several benefits to using IH in assessing skills and choosing interventions. First, IH encourages accuracy in student responses through immediate error correction. After accuracy is achieved, IH increases fluency through drill with an intermittent ratio of error correction and verbal responding to increase opportunities for practice (Ardoin & Daly, 2006). Further, teachers with minimal training and support can efficiently complete IH procedures. However, more research is needed not only to

determine the predictive validity and treatment utility of this methodology differentiating between skill and performance deficits, but also to provide more standardization for its implementation to ensure that implementing IH improves student outcomes (Duhon et al., 2004).

Formative assessment, another methodology for assessing skills to determine interventions, is the process of trying interventions individually and monitoring impact on performance using single-case research designs, which allows the practitioner to utilize response-guided experimentation (Daly, Shroder, & Robinson, 2006). It is based on the idea that there are no guarantees that an intervention will work in a given situation, thus using an intervention and monitoring outcomes is the only way to verify intervention effectiveness (Daly et al., 2005). Formative assessment encompasses the problem-solving model, which identifies the problem, the possible causes of the problem, and bases the intervention on the specific deficits identified. In addition, it considers how instruction, curriculum, and student characteristics interact when choosing interventions (Knuston et al., 2004; Wagner, McComas, Bollman, & Holton, 2006).

Another method for determining the utility of interventions is brief experimental analysis, which consists of collecting baseline data on student performance and collecting data during brief interventions, with the goal of determining which intervention improves student performance by using an abbreviated reversal design. Benefits of brief analysis include focusing on how to teach, using limited time requirements, adapting easily for a variety of difficulties, focusing on what teachers can do to improve performance, and identifying interventions likely to be effective (Noell et al., 2001).

A final method used to assess need for intervention is curriculum-based evaluation (CBE) (National Center on Accessing the General Curriculum [NCAC], n.d.), which encompasses the problem-solving model. It is a problem-solving process applied systematically to make educational decisions through the use of comparison, judgment, and problem-solving rather than through the use of measurements to determine the causal variables, which are usually distal and cannot be modified; it also determines maintaining variables, which are usually proximal and can be modified (Chris, 2008; Howell, Hosp, & Kurns, 2008).

Batsche, Castillo, Dixon, & Forde (2008) posit the idea that assessment is the purpose of the problem-solving model, requiring data to determine which behaviors are necessary to complete a task, assisting in developing interventions, and demonstrating enough sensitivity to changes in behavior to determine intervention effectiveness. It involves problem identification, which includes the hypothesis for the discrepancy between the actual and the desired behavior. Next, problem solving should identify the level of performance desired, determine if curriculum and instruction should be the focus or if the student should be the focus, based upon data from universal screenings and other assessment data. This model uses multiple methods of assessment including reviewing, interviewing, observing, and testing (RIOTS) across multiple sources, which involve instruction, curriculum, environment, and the learner. Finally, during problem analysis, it is necessary to determine if the student has a skill deficit or a performance deficit, test the hypothesis, and use that information to develop interventions, evaluating them both for treatment fidelity and for effectiveness (Christ, 2008; Batsche, et al., 2008).

Curriculum Based Assessment (CBA) is a broad term for assessments used to identify appropriate instructional levels by using assessments directly related to the curriculum; the results of CBAs are then used to create plans for instruction. For example, a CBA in reading is determined by computing the percentage of known words in a passage and the acquisition rate, which is the amount of new information a student can handle before becoming frustrated. This process assists teachers in individualizing instruction to meet student needs, resulting in instruction that is appropriately challenging. Further, it helps staff decide if the problem is instructional or child-centered (Burns, Deon, & Klar, 2004).

Finally, RTI typically utilizes curriculum-based measurements (CBM) as a tool to measure the effectiveness of interventions; this is a tool which provides valuable information on skill level and growth rate. CBMs are a type of CBA and the data are used to determine whether or not instructional modification is necessary. CBM refers to a series of short probes, usually 1-5 minutes, administered to measure student growth in relation to a particular skill such as reading fluency and to evaluate the effectiveness of instruction (NCAC, n.d.; Shinn, 2008). Thus, CBMs are also relatively quick and easy to administer and assist in predicting long-term academic trajectories (McMaster, Fuchs, Fuchs, & Compton, 2002; VanDerHeyden & Jimerson, 2005). The minimal time requirements for administering CBMs allow schools to administer them to the entire student body, providing a clear picture of academic growth of the school, helping to determine the ratio of students at-risk for academic problems (Willis & Dumont, 2006). However, administering CBM's under standardized conditions is essential; variations in student performance have been found, based upon the location of the assessment and the

student's knowledge of being timed. Current procedures instruct the administrator to tell students to do their "best reading." When students were instead told to read as fast as they could without making mistakes, students read the passages faster, but they also made more errors (Colón & Kranzler, 2006).

Evidence-Based Interventions/Evidence-Based Practices

Legislative mandates require the use of evidence-based practices (IDEIA, 2004; NCLB, 2002), and as a field that values data-driven decision-making, school psychology promotes evidence-based practices in schools (Ysseldyke, et al., 2008). These mandates assume that there are evidence-based interventions (EBI) of which school personnel are aware and to which they can transfer from research to practice in a school setting (Detirch, 2008). Despite recent advancements, however, these assumptions are often not met, and many students do not respond to effective instruction, including one-half of students receiving Special Education and almost one-third of students at risk for developing reading problems. This pattern of underachievement highlights the need for school personnel to use targeted interventions that extend beyond generally effective instruction. Additionally, the dual-discrepancy model within RTI requires demonstration of inadequate growth and of performance levels significantly below peers, after receiving an intervention that is generally effective (Danielson, Doolittle, & Bradley, 2007; McMaster et al., 2002), which is predicated on the existence of EBIs.
Research examining the most frequently used interventions in schools, indicated few qualify as EBIs (Detrich, 2008).

EBIs are those that have methodological and statistical support through experimental or quasi-experimental studies published in peer-reviewed journals.

Specifically, the U.S. Department of Education Institute of Education Sciences National Center for Education Evaluation and Regional Assistance (U.S. Dept. of Ed. IES) (2003) provides guidelines for determining those interventions that have enough supporting evidence to be considered evidence-based. This includes quality, randomized, controlled studies that are well-designed and implemented, and quantity, with two or more of those studies conducted in a typical school setting and at least one conducted in a class similar to the one the student attends. However, this report acknowledges the dearth of studies with this level of evidence, especially in areas outside of reading. Consequently, when there are no randomized, controlled studies, educators can refer to group comparison studies with good, rather than strong design, when the groups are closely matched.

The Assistance to States for the Education of Education of Children with Disabilities and Preschool Grants for Children with Disabilities (2006), regulations supporting IDEIA, also provides a definition of requirements for an intervention to be considered evidence-based. According to this definition, evidence-based programs and intervention must be based upon research that is empiric, utilizes rigorous data analyses, uses reliable and valid data across measures, evaluators, observers, and investigators, have an experimental or quasi-experimental method, presented clearly enough to be replicated, and presented in a peer-reviewed journal or found to be adequately rigorous by a panel of experts.

These two definitions vary on the details of what is required; however, overall, they are similar and the process by which interventions are determined to be evidence-based is conceptualized by Detrich (2008) as a series of filters through which research must pass in order to earn the designation EBI. The first filter examines the nature of the evidence

provided, accepting quantitative and rejecting qualitative. The second filter type of evidence rejects descriptive data and allows experimental data that can inform causality. The third filter determines if the research concerning the strength has adequate strength either by a threshold standard, requiring a specific number of studies meeting criteria, or hierarchy, which puts the strength of an intervention on a continuum. The threshold standard is more likely to omit adequate studies unnecessarily, but the hierarchy standard may include inadequate studies. These two standards for measuring intervention strength result in an intervention qualifying as EBI based on the one standard, but not qualifying based on the other standard, potentially causing confusion among practitioners who search through various databases for interventions (Detrich, 2008).

Unfortunately, efficacy is examined in these definitions, but effectiveness is not. Interventions are often difficult to translate into practice because research studies often limit comorbidity of subjects, provide extensive training to staff who will be implementing the intervention, and often have greater financial resources available. As a result, EBIs used in practice often lose some of the impact found in research studies (Detrich, 2008).

School psychologists and educators incorporate these evidence-based interventions into clinical practice, resulting in evidence-based practice (White & Kratochwill, 2005). This is a delicate endeavor, balancing the benefit of using research to guide decision-making without using it to abdicate the practitioner's ultimate responsibility in choosing, implementing, and modifying the intervention based upon the specific contextual variables of the setting (Detrich, 2008). The interventions are incorporated into practice by forming possible hypotheses, using methods mentioned

previously to explain the reasons why a child is not performing adequately, and testing those hypotheses through interventions. Common hypotheses for reading difficulties and possible assessments include insufficient motivation, tested through goal setting and incentives; insufficient practice, tested through repeated reading; insufficient feedback, tested through phrase drills; new performance expectations, tested through listening preview; and frustration-level material, tested by using easier material (Wagner et al., 2006).

Choosing Interventions

Although the purpose of assessment is to choose interventions accurately, the ultimate goal of intervention implementation is skill acquisition and generalization, increasing successful school experiences, especially moving the student from the current level of performance to the expected level of performance (Upah, 2008). Consequently, it is imperative that teachers and other personnel involved in determining interventions are aware of the interventions available and the research base supporting the viability of those options. Current research practices do not reveal perfect interventions for specific types of students or specific difficulties, in a simplistic if-then format, but they identify procedures for determining interventions to implement in given situations. Unfortunately, there is a lack of research denoting systematic procedures for choosing effective interventions for individual students (Wagner et al., 2006). Furthermore, there is a dearth of research comparing treatment options and their utility with a variety of student profiles based upon initial assessment information, limiting practitioners' accuracy in gauging potential outcomes (Daly et al., 2006).

Key intervention characteristics, however, have been identified and include evidence of efficacy, because of the requirement to use evidence-based interventions; simplicity, because teachers are more likely to use a simple intervention than a complex one; goodness-of-fit with the student, because not all students will respond the same way to an intervention (Daly et al., 2005); and sufficient magnitude of the treatment effect, ensuring that the student demonstrates adequate growth (Daly et al., 2006). Interventions also need to demonstrate adequate potency and to incorporate a process for decision-making that promotes quick intensification of interventions to maximize outcomes for children (Knuston et al., 2004). Further, systematic implementation of antecedent controls, such as instructional techniques and consequences, including corrective feedback, increase academic production and generalization of skills (Ardoin & Daly, 2006). Also, if the student has a deficit, then identifying the component skills that are difficult for that student may aid in finding an effective intervention (Daly et al., 2006).

School personnel frequently implement many interventions simultaneously, hoping that one of them will assist the student; unfortunately, this compromises the data, making it impossible to determine which intervention impacted change and which did not (Barnett et al., 2006). This potentially wastes precious resources on ineffective interventions. Currently, researchers generally implement one intervention at a time, changing interventions if expected growth does not occur within a given timeframe, allowing for the possibility that an intervention was not given adequate time to impact academic performance (Daly et al., 2005). An alternative is to add new interventions to those currently being implemented, allowing any potential, positive impact from the first intervention to be realized (Daly et al., 2006). This can also be addressed by beginning

with a treatment package, optimizing initial possible treatment effects, and separating the components later to determine those components that impacted the change (Daly et al., 2005).

Specific Interventions

There are a number of interventions, especially in reading, that have empirical support. Reading fluency and strategies to increase fluency have been studied extensively in recent years, resulting in a number of evidence-based interventions for reading difficulties. The examples of reading interventions provided are not intended to be an exhaustive list. In one intervention, corrective feedback, the teacher indicates when the student makes an error and corrects the error immediately; this intervention has been linked to higher achievement because of its impact on mastery (Ardoin & Daly, 2006; Knutson et al., 2004). Rewards, as an intervention for reading, are utilized by determining a goal fluency rate for a probe. If the student reaches that goal, a small incentive is given, assisting the practitioner in determining if the skill is in the student's repertoire and simply requires a strong enough incentive to demonstrate it (Ardoin & Daly, 2006; Duhon et al., 2004; Wagner et al., 2006). This intervention can easily be adapted to other content areas. Unfortunately, interventions in other content areas, such as math, have been less thoroughly examined in relation to RTI.

Instruction is an intervention for students who are not performing because they lack the skill. Beyond what is typically considered instruction, this intervention can include pre-session practice and advance organizers (Duhon et al., 2004). A pivotal feature of instruction as an intervention for struggling students is group size. Smaller instructional groups provide a variety of benefits including more opportunities for

practice, individualized feedback, coverage of more material in a shorter amount of time, and increased student engagement with the academic material (Knutson et al., 2004). Another intervention used for learning new information is drill; during a drill, students are presented with items to which they respond to in order to increase fluency; this is sometimes combined with error correction procedures (Daly et al., 2006).

Repeated reading is an easily implemented, evidence-based intervention, requiring the student to read and re-read a passage with little time between readings, for a pre-determined amount of time (Ardoin & Daly, 2006; Daly et al., 2005; Daly et al., 2006; Wagner et al., 2006). Listening passage preview involves an adult reading the passage aloud before the student reads it, in order to improve accuracy and fluency in reading the passage (Daly et al., 2006). Syllable segmentation involves the practitioner's stopping the student when he or she mispronounces a word in a passage both on an initial reading and on a second reading, then asking the student to break the word into syllables and reassemble the syllables (Daly et al., 2005). The stop-go intervention is used to assist students who have fluency difficulty because of a failure to pause at end punctuation. It requires the student to stop at the end of each sentence and count to three before continuing with the next sentence.

Reliability and Validity

NCLB, the primary legislative impetus for implementing evidence-based practices in schools, requires that educational practices are based upon objective, reliable, and valid procedures (2002). The challenge is translating efficacious interventions into effective interventions. Efficacious interventions impact positive changes in highly controlled research settings, but those that are effective also reliably impact positive

changes in highly variable real-life settings (Hallfors, Pankratz, & Hatman, 2007; Leventhall, & Friedman, 2004; Smith, Daunic, & Taylor, 2007).

Reliability and validity of EBI can be established through standardized administration of interventions and inter-rater reliability. Specifically, in the RTI model, reliability and validity can be improved by using a well-defined model, adhering to an intervention long enough, and choosing interventions based on an understanding of the principles of learning. Although it is important to use pre-established evidence from large scale, controlled studies, it is also important to collect on-going evidence of the intervention's effectiveness for the particular application. It is important to balance the two purposes of ensuring technical adequacy in RTI: to have confidence in the outcomes of the process and to help students as individuals and as groups (Barnett et al., 2006).

There are several ways that practices and interventions, clearly recognized in other fields, garner the label evidence-based; however, education and school psychology have not yet settled on procedures. White & Kratochwill (2005) summarize four methods used to provide some level of standardized practice within a field, citing both the strengths and weaknesses for each. First, manualized interventions provide detailed steps and descriptions of the materials used for the interventions, increasing the treatment integrity and making the interventions easier to implement. They generally, however, do not provide information on what to do if the student does not respond. Second, treatment guidelines are protocols that assist practitioners in the process of implementing an intervention, and accompanying treatment algorithms give steps for making clinical decisions, increasing clarity. However, these tools often oversimplify the process by giving one course of action to utilize for all cases. The third, expert consensus guidelines

are recommendations attained by surveying experts in that area and are an important start for gaining understanding when there is little data; however, it is based on opinions, which vary widely and can be wrong. Finally, practice guidelines are documents that provide recommendations based upon a comprehensive literature review conducted by experts in that area. This process provides a range of criteria for making decisions that are based upon empirical research.

Progress Monitoring

After practitioners decide on appropriate goals and interventions, they must monitor the impact of the intervention on student performance. Thus, progress monitoring is essential in the process of determining if the student is progressing adequately. Monitoring progress does not ensure that a treatment will have the desired impact; however, it aids in making those determinations, and when experimental analysis is utilized, it shortens the process of determining treatment effect (Daly et al., 2005), allowing for timely modifications. Progress monitoring should include quick probes to measure progress toward identified goals, either normative or benchmark, be valid and reliable, assess student's response to instruction, assist in making intervention decisions, and be sensitive enough to demonstrate changes in performance (Ardoin, 2006; Shapiro, 2008).

Fuchs, Fuchs, & Stecker (1989) noted teachers' tendencies to overestimate student performance and progress toward goals; consequently, constructing tools to inform decisions about appropriate goals and interventions would increase the efficiency of addressing common referral problems (Duhon et al., 2004). One existing tool, CBM, provides more objective data upon which to base decisions other than upon teacher

perception. Using CBM data to chart progress provides opportunities to acquire additional information when the initial intervention did not result in adequate progress. Although goal mastery has face validity, it does not necessarily indicate adequate progress. When teachers set easily attainable goals and overestimate performance, the results can be misleading. Rather, optimistic goals with realistic assessments of progress toward those goals, monitored through CBM, are more likely to result in higher levels of achievement (Fuchs et al., 1989). However, it is difficult to make reliable goals and decisions concerning progress toward goals based solely upon CBM data (Ardoin, 2006).

A study by Fuchs, Fuchs, & Stecker (1989), demonstrated that teachers who use CBM to guide instructional decision-making and progress monitoring were more realistic about progress, more responsive to progress, or lack thereof, and wrote more complete goals than teachers who did not use CBM. Their students, consequently, earned higher grades and made more progress in the curriculum, despite the greater level of optimism and stated goal achievement of the teachers who did not use CBM. Further, when teachers have CBM and diagnostic feedback, they address more skills through their instruction, modify instruction, and implement adaptations more readily than those without diagnostic feedback (Capizzi & Fuchs, 2005).

Although data provided through CBM probes can identify how much progress that a student is making toward a given goal, that information is generally not sufficient to guide decisions regarding the types of interventions needed to remedy the deficit (Wagner et al., 2006). Special education teachers and teams implementing RTI are required to write individual plans for student goals to address the identified difficulty, to monitor progress toward those goals, and to make instructional changes when the goals

are not being met (Pennsylvania Department of Education, 2008). In actuality, however, resource rooms look similar to regular education classrooms, providing group instruction with little to no differentiation or modifications to instruction when students struggle. Providing specific information on student needs did not result in changes in instruction in elementary classrooms for students who also receive resource room support. This lack of instructional differentiation was, unfortunately, not surprising because of the research showing the limited impact of diagnostic feedback on instructional practices (Capizzi & Fuchs, 2005).

Treatment Integrity

Treatment integrity is the cornerstone of the usefulness of the RTI model in ensuring that a student's lack of response is a meaningful indicator of student attributes rather than of the intervention. Further, treatment fidelity is a requirement in implementing interventions both at the state and at the federal levels, especially when the RTI model is implemented for eligibility decision-making (Pennsylvania Department of Education, 2008; U.S. Dept. of Ed. IES, 2003). It is defined as the degree to which a plan is implemented as designed, and it requires the use of strategies to ensure the plan is carried out as planned, both across students and across time (Smith et al., 2007). It cannot be assumed that an intervention has been implemented with integrity without robust evidence to support it (Noelle & Gansle, 2006).

Roach & Elliot (2008) suggest that effective implementation is contingent upon the state and the school district to assist large numbers of teachers in implementing interventions and monitoring progress of students. Clearly defined components of the intervention are a prerequisite to monitoring the fidelity of intervention implementation

so that all implementers and observers understand what each component should look like. Consequently, treatment integrity is increased when the intervention is chosen, based upon a well-defined problem. Additionally, delineating who is responsible for which aspects of the intervention, writing down instructions, modeling and practicing the intervention, and providing feedback may increase accuracy in implementing interventions. It is best practice to utilize standardized interventions because they allow for replication and aid in training specific skills; unfortunately, there are few standardized interventions.

Often when interventions are utilized in schools, student progress does not increase at the desired rate. The many conceivable reasons for this include a learning disability, using an intervention that does not match the student's needs, or not implementing an intervention with integrity, the most parsimonious of which is a lack of treatment integrity (Wagner et al., 2006). Unfortunately, many teachers view implementing interventions as being outside of their job descriptions or they have an a priori assumption that the student needs a more restrictive placement, resulting in frequent and significant lapses in treatment integrity.

Additionally, research suggests that teachers, as a group, express skepticism about the importance and usefulness of research related to their daily tasks; from their perspectives in the classrooms, the pendulum of best-practice swings widely from one extreme to the other, leading them to conclude that data is manipulated and that if they wait long enough, their chosen practices will be best-practice again. Teachers also indicate that they are provided with vague blanket statements about practices being research-based without specifics about that research. They often feel that the research

they are given does not focus on students with Learning Disabilities or Emotional Disturbances. Beyond the perceived lack of relevant research provided, teachers perceive their expertise as encompassing the skills to choose and modify, as needed, the most appropriate curriculums and interventions to teach students. When considering research-based interventions, they are overwhelmed by the breadth and depth of student needs, noting that the programs offered do not adequately meet those needs. On a more practical level, teachers assert that the material, time, and other necessary resources to implement the programs are often not provided (Broadman et al., 2005). This assertion suggests that districts implement system-level change in a manner contradictory to the research cited earlier, which concerns how to do so effectively.

Teachers indicate that they often choose to use bits and pieces rather than complete programs and make decisions based on personal preference rather than district policy or research (Broadman et al., 2005). Teachers often indicate a preference for collaboration in the consultative process, but this does not translate into increased implementation of the intervention; further, the research on effectiveness of consultation is based primarily on teacher self-report, which does not measure actual changes in behavior (Wickstrom, Jones, LaFleur, & Witt, 1998). Additionally, there is often no substantive reason for teachers to comply with feedback from consultation because the consultants have no administrative power, making compliance appear optional (Noell et al., 1997). This fails to take into account the requirement by NCLB to ensure the use of evidence-based practices (Kovaleski, 2007). It is no longer optional.

There is limited research on the actual level of treatment fidelity in implementing programs in schools; however, Hallfors, Pankratz, & Hartman (2007), in their study on

the implementation of drug and alcohol prevention programs in schools, found that in the few schools that actually implement prevention programs, there are significant problems. These include not providing teacher training in the program, not providing teachers with all of the requisite materials, not delivering the curriculum to the appropriate age group, and not teaching all of the lessons. Further, their study suggested that federal funding provided to states is directly related to the amount of monitoring and advise districts who receive funding on how to implement programs. The systematic lack of fidelity in implementing prevention or intervention programs makes replication of interventions and programs in real life situations, effectiveness, difficult to determine (Smith et al., 2007). This lack of compliance is compounded by unclear standards for implementing RTI, resulting in little consistency in process or standards between states or districts (Mastropieri & Scruggs, 2005).

There are multiple means of evaluating treatment integrity, each with pro's and con's. Five of these methods include direct observation, feedback from an expert, self-monitoring, evaluating permanent products, and manualizing interventions, with fidelity increasing further by combining methods (Smith et al., 2007). More research is needed to determine the level of treatment integrity required for a treatment to be effective, considering that they are implemented in a highly variable school setting rather than a highly controlled research setting. Not all components of an intervention have the same weight or necessity in maintaining the original intent of the intervention and it is necessary to identify those components which are critical in order to provide interventions detailed enough to implement with fidelity but not unbearable enough to attempt in schools (Noelle & Gansle, 2006).

The Pennsylvania Department of Education's (2008) guidelines for determining eligibility for Specific Learning Disability in districts choosing to use RTI lists several methods districts may use to monitor the fidelity of instruction and interventions. These include the principal observing teachers, using commercial or locally created integrity checklists; the checklists can also be used as a self-monitoring tool by teachers or by staff including peers, and content or curriculum specialists.

Determining Adequate Response/Decision Making

Progress monitoring data is of little use if it is not used to make decisions about educational interventions: whether or not student response to the intervention has been adequate and the intervention was successful or inadequate and modifications to implementation or to the intervention itself are necessary. Barth et al. (2008) argue that measurement of student response to interventions is evident because it is a determining factor in moving between tiers and in determining SLD; however, no specific criteria has been set for how to determine adequate response to an intervention. The Pennsylvania Guidelines for Identifying Students with Specific Learning Disabilities (Pennsylvania Department of Education, 2008) indicate that it is the responsibility of school districts to determine the criteria for adequate rate of student improvement.

There are several challenges that have impeded the creation of uniform guidelines about how to determine adequate response to an intervention. One difficulty is that for purposed of determining adequate response for RTI, level of response to an intervention is forced into a dichotomy of those who respond adequately and those who respond inadequately when it actually exists on a continuum. Another challenge is in choosing a method for measurement. There are three methods frequently used, including criterion-

referenced benchmarks, slope discrepancy, and dual discrepancy, which is a combination of the two and is the one used in Pennsylvania. However, research comparing them has not demonstrated that any one of these methods is preferable to the others (Barth et al., 2008). The final challenge is in how to determine the place at which the cut point separating the dichotomy of responders and non-responders should be. This is in part due to error of measurement, which makes interpreting performance near the cut point challenging.

The decision making process related to student responsiveness is intimately related to the treatment validity, reliability, and integrity of the interventions. Some RTI proponents conceptualize it as a replacement for standard psychoeducational assessments (Kovaleski, 2007; Reschly, 2008) and, as such, the basis for determining if a student has a disability and is eligible for specially designed instruction. Using RTI to determine eligibility increases the necessity to define student responsiveness. There are multiple criteria that can be used to determine a student's responsiveness to an intervention, including below average performance on a specific standardized measure of an academic skill, not reaching a predetermined criteria, or dual discrepancy, in which the student's performance is at least one standard deviation below classroom peers on a measure and whose slope of skill attainment is not sufficient to achieve a level of performance commensurate with peers (Fuchs & Fuchs, 2006).

This reliance on classroom or district level norms is helpful in understanding students in the context of their environments, but it is possible to result in a skewed perception of individual performance. Students in high achieving schools may present as not achieving adequately when compared with local norms but achieve adequately when

compared with a larger normative sample. On the other end, students may be determined to have adequate levels of achievement in the context of the local data but are unable to pass state level assessments in compliance with NCLB. Consequently, Danielson, Doolittle, and Bradley (2007) argue that decision benchmarks based on statewide norms may be more useful; this is supported by guidelines in Pennsylvania (Pennsylvania Department of Education, 2008). There is also a need to clearly define more clearly the parameters for determining whether or not the implementation of the RTI model is successful. For example, reducing the number of students in special education is not an adequate measure of the effectiveness of RTI, and Kovaleski (2007) suggests that performance on statewide assessments may be a more appropriate measure of RTI effectiveness.

In addition to concerns about the lack of consistency in standards for determining adequate responsiveness to an intervention, there are additional concerns about the sufficiency of response to an intervention in determining eligibility or disability. Specific learning disability, according to the federal definition is a "disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations" (IDEIA, 2004). RTI alone is unable to identify a processing deficit, which is part of the definition of a learning disability, albeit with no indication of how processing deficits should be identified. RTI does not differentiate between other disabilities that impact skill acquisition and application (Mastropieri, 2005). Further, a student's response to intervention, at least in some cases, may reveal less about individual difficulties than about a team's choice of student skill deficits to

address, about interventions to use, about integrity in implementing the intervention, or about tools used to measure progress toward those goals (Barnett et al., 2006).

Professional Development

As mentioned in the discussion of treatment fidelity, a foundational assumption of RTI is that research-based interventions are implemented with integrity, but there are many obstacles impeding it from becoming a reality. One major obstacle is the lack of pre-service and in-service training that both regular education and special education teachers receive. Although NCLB (Title IX, Section 9101[34]) requires that teachers receive professional development in using assessment data to guide classroom instruction, and it is a necessary aspect of RTI, many teachers' understanding of the principles of assessment is limited (Braden, Huai, White, & Elliot, 2005). Current research indicates that there is limited evidence of research-based interventions being taught in pre-service coursework, suggesting that the individuals who are expected to implement interventions with integrity do not possess the requisite skills to do so (Broadman et al., 2005;Detirch, 2008; Kovaleski, 2007; Kratochwill, Volpiansky, Clements, & Ball, 2007).

Pre-service training is a primary vehicle for developing teachers' knowledge base both in content areas and pedagogically. The research base of reading is wide and deep, resulting in most of the current RTI research centered on reading instructions and interventions. Tier 1 instruction and interventions in Tiers 2 and 3 are predicated on teachers who are well versed in the use of evidence-based curriculum and interventions. Regrettably, most teachers lack a clear understanding of the structure of English words, the expected development of specific reading skills in children, the typical areas of

weakness of at-risk readers, and of ways to administer and interpret assessments of reading (Spear-Swerling, 2008).

These deficits are not surprising when viewed in light of a study conducted by the National Council on Teacher Quality (Walsh, Glaser, & Wilcox, 2006), examining the syllabi and textbooks of reading courses in colleges and universities across the country. This study examined the syllabi and textbooks to determine if the five major aspects of balanced literacy were even referenced; these include phonemic awareness, phonics, decoding, fluency, and comprehension. This study found that accreditation did not increase the likelihood of balanced literacy being taught and that direct instruction of reading is depicted as being possibly detrimental and that the balanced literacy model is no more valid than any other model. These courses generally demonstrated limited academic rigor with few requirements to demonstrate or apply skills or knowledge and most assignments requiring only personal reflection. The textbooks listed in the syllabi often misrepresented the science of reading if they addressed it at all, and the authors demonstrated misunderstandings of basic concepts.

Consequently, teachers generally support high standards for the quality of the instruction provided and for student achievement, and they desire to enhance their skills and knowledge base as well as their facility in applying that knowledge and those skills in a flexible manner; however, the training and professional development they have received has not prepared them to continue to improve their instruction in a manner to help students achieve at that level (Garet, Porter, Desimone, Birman, & Yoon, 2001). Boyle, Lamprianou, & Boyle (2005) suggest that traditional professional development typically occurs in short workshops or conferences during which an expert shares

information with teachers and although it may increase knowledge about the topic, it does not provide teachers with the opportunities to learn, reflect upon, and practice skills, which are necessary for meaningful changes in practice (D'Silvia, Calton, & Duggan, 2005).

The Center for Strengthening the Teaching Profession (2004), in a survey of teachers in the state of Washington, found that most of the professional development provided to teachers by the school district focused on providing updates on state reforms. Teachers indicated that the professional development provided through their schools did not include follow-up support; one-half felt that the professional development offered did not address issues that concerned them. As a result, teachers turned to colleagues to fill in the gaps in the professional development needs.

In order to provide teachers with the knowledge they need to understand the purpose of and implement of interventions as designed, requires addressing the structural and core features of professional development. The structural components or the context include embedding training in existing networks, such as buildings and teams, and working on the task for an extended period of time rather than sending teachers out for a conference or workshop. The core or content of trainings need to incorporate active learning so that teachers practice applying the knowledge; it also needs to focus on how to incorporate these skills into the relevant content areas. Providing teachers with adequate training increases the likelihood that they will implement programs and do so with fidelity, which positively impacts student outcomes (Kratochwill et al., 2007).

Prevalent research on professional development borrows from the situative theorists, who propose that learning is more than cognition; it involves physical location,

social context, and the activities involved in the learning experience. Additionally, it promotes the idea that generalized application of learning requires that the learning experiences mirror applied tasks and focus on shared knowledge among a group rather than the knowledge and skills of an individual (Keller, Bonk, & Hew, 2005; Putnam & Borko, 2000). This research on professional development provides insight into who should be involved in training, when and where it should occur, what content should be covered, and the processes for providing it.

In the area of who may be involved, this research notes that effective professional development is more likely to include teachers from a building training together, creating a sense of community and cohesion among the staff participating in the professional development. When teachers who are training together struggle with implementing new ideas, they have support to problem-solve. Additionally, teachers who work together have the same curriculum and building requirements, making group work more meaningful. When multiple staff members from a building train together, this minimizes the detrimental impact of staff turnover, because the knowledge is shared among multiple faculty members. Neither are staff members who train together limited to a single discipline, and many teachers have found the diversity of expertise in working on cross-disciplinary teams to be extremely valuable in increasing the depth of their knowledge (Keller, Bonk, & Hew, 2005; Garet et al., 2001).

Further, extant research suggests that incorporating continued educational experiences for teachers within their actual classrooms by providing some of the professional development in those teachers' classrooms and during the school day, aids in using learned skills in daily practice. Further, this provides opportunities for teachers to

observe their peers' instructions as well as additional opportunities for feedback on implementing new skills. Additionally, integrating professional development and professional practice, encourages engaging with the material not only on a deeper level but also for a longer duration, especially if teachers are provided with opportunities to discuss the results of implementing these new skills (Garet et al., 2001; Putnam & Borko, 2000).

Moreover, the process of professional development or the "how" impacts the effectiveness of changing the way teachers practice. Processes that increase the impact on classroom instruction include incorporating active learning opportunities. Examples of active learning opportunities include observing skilled teachers using a technique, reviewing samples of student work through the lens of newly acquired knowledge, presenting material to peers, study groups, receiving or providing coaching or mentoring, networks, and immersion in inquiry, a process through which teachers engage in the activities they will use with their students (Boyle et al., 2005; Garet et al., 2001).

A qualitative study of national board certification as a means of professional development (Park, Oliver, Johnson, Graham, & Oppong, 2007) noted that teachers who completed this process reported improved teaching practices. Educators have created a process, in the unique social setting of schools, to educate themselves through interacting with veteran teachers. Through the anecdotes of veteran teachers and of peers, newer teachers learn about working with challenging students and parents, and develop their own theory on teaching. The process is integral to support teachers in earning their national board certifications; teachers who have earned this certification emphasized the fact that the level of collaboration with peers and the emotional and tangible support

provided by colleagues who were also going through the process resulted in a greater depth of reflection on their teaching and raised their personal standard for the quality of their teaching.

The "what" of professionalism should be connected with the districts' goals, state and district's standards for student achievement, and expectations for instruction provided by teachers. This covers several dimensions of the content including the subject matter emphasized (e.g., content area knowledge, pedagogy, and the interface of the two), instructional changes encouraged (e.g., curriculum and strategies), student goals, (e.g., basic skills and conceptual understanding), and ways in which students learn (e.g. level of active learning) (Garet et al., 2007).

Currently, districts often use consultation by a school psychologist or an educational consultant to support teachers in implementing research-based interventions. Ideally, this includes some didactic training for the teacher and supervision of the teacher during initial implementation, including feedback; however, teachers initially implement the interventions as prescribed in this ideal format, but treatment fidelity quickly decreases (Noell, Witt, Gilbertson, Ranier, & Freeland, 1997; Wickstrom et al., 1998).

Summary

The RTI process is a promising construct for providing interventions for children with academic difficulties, but it is also vulnerable to misapplication, severely compromising its utility. When implemented well, RTI often improves treatment validity, moves the decision-making process into the context of the instructional environment rather than simply examining within-child problems, and increases the effectiveness of interventions through the use of progress monitoring. On the other hand, there are areas

that require further exploration and explanation. Research examining the necessary components for effectiveness is needed, as well as research concerning acceptable decision-making criteria, translating research into practice, ways to ensure treatment integrity in a school setting, and ways to determine what constitutes adequate progress (VanDerHeyden & Jimerson, 2005). There are currently limited data available analyzing the reliability, validity and outcomes of RTI because it is still a relatively novel and complex process, integrating assessment and services (Noell & Gansle, 2006). These aspects of RTI need to be studied further in order to provide adequate support and guidance to school personnel delivering these services.

RTI has gained popularity in recent years, in part because of the weaknesses in the traditional intelligence-achievement discrepancy model, but also because of its potential to link assessment and intervention more clearly, increasing its utility as a preventative tool. Evidence-based interventions have been clearly identified for reading and are already being implemented in schools with some success; however, evidence-based interventions in other academic areas and for behavioral difficulties are less well established. Further, there are several models for systematically deciding which interventions to use and how to order them, but more research on their effectiveness and acceptability in school settings is necessary before a preferable model or models are determined. Considering the ambiguity in the research pertaining to the implementation of RTI and the rapid adoption by districts, it is likely that teachers have not been adequately prepared to use this model effectively in their classrooms. This is likely to have a detrimental effect on the actual usefulness of RTI in preventing and intervening in academic problems.

Hypotheses

Despite the recent surge in districts and schools embracing the concept of RTI, it is hypothesized that there will be no differences between teachers who work in a school that uses RTI and those who do not work in such schools, in their understanding of or use of the practices underlying RTI including assessment, intervention strategies, progress monitoring, and decision-making procedures. It is also hypothesized that the degree to which teachers perceive RTI to be an effective process for eligibility decisions will be correlated with their perceptions of the school's level of planning in implementing the prerequisite system-level change.

Chapter 3

Methodology

Recruitment

Special education and regular education teachers from randomly selected elementary schools were solicited to participate in this study. The five hundred and one school districts of Pennsylvania were divided into eight groups based on student enrollment, using tables provided by the Department of Education. The survey was initially sent to 1,500 teachers from 100 schools in 99 districts. Because of its large enrollment, the School District of Philadelphia was alone in an enrollment range, and two schools were selected from that district. Because of low response rates after the first week, 500 additional teachers from the same districts were chosen, resulting in a total of 2,000 teachers in the sample.

The districts chosen for sampling were stratified by student enrollment: the number of districts chosen from each enrollment range mirrored, approximately, the percentage of districts in the state with student enrollments in that range. The districts from each enrollment range were chosen by using a random number chart. If the district had more than one elementary school, the elementary school sampled was also chosen by using the random number charts. Finally, the teachers from each school were chosen by using the random number generator. Middle and high schools were not included, because the current emphasis of RTI implementation has been on elementary schools. Participants from the recruitment sample are described in detail in the results section.

Instrument

Survey research, including web-based surveys, is typically designed in order to obtain self-reported, personal information from a sample that would not be easily obtained using other methodology (Rea & Parker, 2005). Some research has suggested that web-based surveys have lower response rates than other survey methods such as face-to-face, telephone, and mail, even when the population has access to the internet (Kaplowitz, Hadlock, & Levine, 2004). However, when the population is well delineated in size and location, web-based surveys are useful tools (Trouteaud, 2004). Further, the extant literature on web-based surveys is limited, with few current studies, and the continued increase in the use of internet-based services and tools in recent years may impact current response rates. As with any instrument designed to gather data, surveys, and web surveys in particular, have both benefits and detriments. Benefits of survey research, in general, include the cost-effectiveness, convenience, rapid data collection, and confidentiality. Web-based surveys have the added benefit of ease of specializing and adapting the survey instrument, availability of user friendly formats, minimization of accidental skipping, and minimization of data entry errors. The primary detriment of surveys is self-selected responders, and web-based surveys, in particular, have the detriments of being potentially limited by respondents' lack of internet access, providing no way to clarify misunderstandings, and the multiple steps required to respond to a web-based survey (Huang & Liaw, 2005; Porter & Whitcomb, 2005; Rea & Parker, 2005).

The envelope and introductory letter accompanying surveys sent through the mail provide valuable information to the potential respondent about the institution sponsoring the research and about the research itself. In the same way, introductory emails to the

survey should include information about the agency involved, the connection of the survey to the population, the goal of the survey, the reason that the respondent was included in the sample, the value of participation, confidentiality, and estimated time needed for completion (see Appendix A).

The following guidelines were followed: generally, it is recommended that questions progress from factual, easy to answer questions at the beginning to more difficult or sensitive questions near the end. Related questions should be grouped together land follow a logical sequence. Closed questions are typically easier to answer, especially when soliciting sensitive information and answers to closed questions provide easy data entry. However, closed questions sometimes lead to random responding, to errors, or to missing subtle wording differences. Open-ended questions are more challenging for the respondent to answer and for the researcher to code because of irrelevant information and subjectivity; they should be used sparingly and placed as late as logically possible in the survey. Overall, the survey should be concise but should adequately cover the material in order to ensure clarity and comprehensiveness as well as manageability. Consequently, it is recommended that the survey take approximately 15 minutes or less, with the caveat that respondents perceive that complex surveys and those with more open-ended questions take longer than they actually do (Rea & Parker, 2005).

Three types of information are typically collected through survey research; these include descriptive, behavioral, and attitudinal information (Rea & Parker, 2005). The present survey, Teachers' Understanding of Response to Intervention (RTI) in Pennsylvania, developed by the author (see Appendix B), requested responses about the teachers' demographics, understanding of interventions, the processes of choosing and

implementing interventions, monitoring progress, preparedness to engage in these processes, and training in this area. Questions involving current practice consisted of two parts: one asking about the frequency of use and one asking about the perceived importance, both using a Likert scale. In order to maintain neutrality, the Likert scale questions pertaining to beliefs or perceptions are stated to allow respondents to indicate the degree to which they agree or disagree with the statement, keeping these on a five, seven, or nine point scale (Rea & Parker, 2005).

Crawford, McCabe, & Pope (2005) summarized guidelines for designing web-based surveys based upon both research and standard practice, when research was unavailable. These standards are broken into four areas. The first, screen design, relates to basic appearance of the screen. When designing the screen, there should be no background color that could interfere with contrast or images that may increase download time and result in increased break off rates. Studies on the use of progress indicators have demonstrated mixed results, but no studies have demonstrated a decreased break-off rate when a progress indicator is used; consequently, it is wise to omit the use of progress indicators for web-based surveys.

The second area is questionnaire writing. This includes text; the standards suggest the use of sans serif 10-12 point font, with the questions bolded, the responses regular, and error messages in red. Additionally, the number of questions per page should be limited to what can be seen without scrolling. Software now allows surveys to be designed to skip questions irrelevant to the respondent, so numbering the questions should be avoided.

The third area to consider in designing a web-based survey is response communications, which encompasses the response option formats provided. When a single answer is permitted, one uses radio buttons, but if there are multiple response options, check boxes should be used. The final area, survey interaction, relates to how the respondent moves through the survey. A "quit survey" button should not be included because the option to close the browser is constant. It is also advisable to have the responses saved after each screen so that if a respondent breaks off the survey, the data completed will still be accessible.

Before administering a survey, it is important to conduct a trial run with approximately 20-40 respondents, obtaining feedback on clarity of questions, comprehensiveness of survey, and acceptability of the assessment, especially as it relates to time requirements (Rea & Parker, 2005). Prior to sending the survey to the sample, it was sent to an available group that provided feedback relative to wording that was used to refine the survey prior to sending it to the sample. Feedback from the trial run resulted in a few, minor wording changes.

Design and Procedure

Teachers randomly chosen from Pennsylvania schools, as described in the participants section, were sent an email identifying the institution affiliation, describing the population, purpose of the study, reason the potential respondent was chosen to participate, value of participating, and the estimated time to complete the survey, along with a link to a web-based survey (i.e., surveymonkey). A follow-up email was sent one week later, reminding teachers of the opportunity to participate in this research, and a final email was sent two weeks after the initial email. The second group of 500 teachers

received the same email procedures but began and ended one week after the initial group received the email. The total data collection period was one month.

A primary concern with survey research is in ensuring an adequate response rate. Several strategies for increasing response rates to surveys have been highlighted in the research. Contacting respondents multiple times increases the rate of response, with three contacts being most widely used (Kaplowitz, Hadlock, & Levine, 2004; Porter & Whitcomb, 2005; Trouteaud, 2004). Trouteaud (2004); because of a technical error, it was also found that response rates are higher when respondents receive the email prior to the start of the workday rather than during the workday. Consequently, all emails in the current study were sent over the weekend.

Research suggests that respondents will answer questions about which they are uniformed when a "don't know" (DK) option is not offered; therefore, providing a DK response decreases uninformed answers. Some respondents, however, still choose to offer an opinion when DK response is offered. Although respondents often do not have well-formed opinions, answering survey questions activates knowledge and results in the respondent forming opinions through the process of completing the survey (Graeff, 2003). Consequently, it generally is advisable to include open-ended questions late in a survey; however, one open-ended question in this survey, which asked respondents to identify resources within their buildings to help struggling readers, was near the beginning of the survey. The only other open-ended question, providing an option to share additional comments about RTI was the final question of the survey.

Chapter 4

Results

This chapter reports the analysis of data from a survey investigating Pennsylvania teachers' understanding of RTI both in schools using and in schools not using RTI. The analyses also examine perceived effectiveness of components of RTI in relation to perceived implementation of aspects of system-level change processes. Statistical analyses used to examine the data included frequency tables and cross tabulation tables. The survey data was downloaded from www.surveymonkey.com into an Excel spread sheet and then imported to a Statistical Package for Social Sciences version 15.0 for analysis.

Data Collection and Sample Demographics

A link to the survey was emailed to a total of 2,000 elementary school teachers in Pennsylvania, with reminder emails sent two consecutive weeks after the initial email. Of the 2,000 email sent, 189 were completed, resulting in a return rate of 9.5%. Forty-eight respondents did not indicate whether or not their district uses RTI, rendering their surveys unusable; this resulted in a usable response rate of 7.1%

Participants

Demographic information was obtained through the first eight questions of the survey, which are summarized in tables one and two. As depicted in Table 1, the majority of respondents were female (89.3% RTI, 93.0% non RTI) and Caucasian (96.4% RTI, 98.2% non RTI). Respondents' degree earned was split between bachelors (42.9% RTI, 43.9% non RTI) and masters (57.1% RTI, 56.1% non RTI), with no respondents

indicating that they had earned doctorates. Over one-half of respondents indicated that they

Table 1

Survey Respondent Demographic Variables

	RTI (n=84)		Non RTI (n=57)	
Gender	*f*	%	*f*	%
Male	7	8.3	3	5.3
Female	75	89.3	53	93.0
No Response	2	2.4	1	1.8
Ethnicity	*f*	%	*f*	%
Caucasian	81	96.4	56	98.2
African-American	2	2.4	0	0.0
American Indian/Native Alaskan	0	0	0	0
Asian	0	0	0	0
Native Hawaiian/Other Pacific Islander	0	0	0	0
Hispanic/Latino	0	0	1	1.8
No Response	1	1.2	0	0
Highest Degree	*f*	%	*f*	%
Bachelors	36	42.9	25	43.9
Masters	48	57.1	32	56.1
Doctorate	0	0.0	0	0.0
Teaching Position	*f*	%	*f*	%

Regular Education Teacher	17	20.2	9	15.8
Instructional Support Teacher	50	59.5	38	66.7
Special Education Teacher	8	9.5	3	5.3
Other	9	10.7	7	12.3
Number of Years Teaching	*f*	%	*f*	%
1-5 years	22	26.2	14	24.6
6-10 years	19	22.6	9	15.8
11-15 years	13	15.5	12	21.1
16-20 years	6	7.1	7	12.3
21+ years	24	28.6	15	26.3
Certification Level	*f*	%	*f*	%
Emergency Certification	0	0.0	0	0.0
Level 1	29	34.5	18	31.6
Level 2	55	65.5	38	66.7
No Response	0	0.0	1	1.8

were instructional support teachers (59.5% RTI, 56.1% non RTI). Areas of instruction most common for respondents who chose *other* (10.7%, RTI 12.3% non RTI) included reading (e.g., reading specialists, interventionists, coaches, and Title I), specials (e.g., physical education/health, art, music), and accelerated/gifted. The number of years teaching was fairly evenly distributed with the exception of 16 to 20 years (7.1% RTI, 12.3% non RTI), which represented a smaller number of respondents. Additionally, the majority of respondents have attained Level 2 (65.5% RTI, 67.7% non RTI) certification for teaching in Pennsylvania.

Table 2 summaries the grades taught by respondents; the total percentages in this table do not equal 100% because respondents indicated all of the grades taught. Sixth grade had the lowest number of responses, probably because sixth grade is not included in elementary schools in all districts. Overall, first grade had a high level of response across respondents. Respondents who did indicate use of RTI were more likely to indicate that they taught multiple grades. It is likely that respondents teaching specials such as music, art, library, and gym frequently teach multiple grade levels.

When asked to indicate the locale of their school districts, respondents were instructed to choose all of the locales that represented their districts; consequently, response percentages do not equal 100%. Just over one-half of respondents indicating that their districts use RTI responded that their districts were, at least partially, suburban (56.0%) and just over one- quarter of those in districts not using RTI (28.1%) indicated a suburban locale. Over one-half of the respondents indicating their district does not use RTI responded that it was, at least partially rural (56.1%), and 38.1% of those in districts

Table 2

Grades Taught by Respondents

Grade	Respondents who use RTI (RTI) (n=84)		Respondents who do not use RTI (Non RTI) (n=57)	
	f	%	*f*	%
K	26	31.0	15	26.3
1	34	40.5	23	40.4
2	26	31.0	14	24.6
3	33	39.3	20	35.1
4	28	33.3	12	21.1
5	17	20.2	17	29.8
6	8	9.5	4	7.0

using RTI indicated this. There were few responders from even partially urban districts (RTI 9.5%; non RTI 17.5%).

Understanding and Use of RTI

Tables 3 and 4 summarize responses to survey questions 9 and 10, related to respondents understanding of components of the RTI process.

The first question asked respondents to identify resources used in their school buildings to help struggling readers; 8.3% of respondents in districts using RTI and 12.5% of respondents in districts not using RTI did not respond.

Table 3

Percentage of Respondents Who Listed Resources to Help Struggling Readers

Commercial Programs			
RTI	%	Non RTI	%
Reading Recovery	8.3	Reading Recovery	10.5
SRA Program	9.5	SRA Program	1.7
Earobics	3.6	Earobics	3.5
My Sidewalks	2.4	My Sidewalks	1.8
Fast ForWord	3.6	Fast ForWord	1.8
Reading Street	2.4	Reading Street	1.8
Wilson	2.4	Wilson	1.8
Leveled Literacy	2.4	Leveled Literacy	3.5
100 Book Challenge	1.2	100 Book Challenge	1.8
Accelerated Reader	2.4	Accelerated Reader	1.8
Read Naturally	13.1		
SOAR to Success	7.1		
Story Town Leveled readers	2.4		
Fundations	6.0		
LETRS	3.6		
EAP	2.4		
Compass Learning Software	2.4		
Sonday System	2.4		
Waterford Early Reading Program	2.4		

I Can Read	1.2		
Reading Across the Curriculum	1.2		
Early Reading Initiative	1.2		
Harcourt Trophies Remediation	1.2		
		Guided Reading	5.3
		Study Island Software	3.5
		Scott Foresman Basals	1.8
		Education City	1.8
		Harcourt Reading Series	1.8
		NCS Learn	1.8

List of Personnel as Resources

RTI	%	Non RTI	%
Title I	40.5	Title I	56.1
Reading Specialist/Teacher	22.6	Reading Specialist/Teacher	17.5
Reading Aides/Paraprofessionals	15.5	Reading Aides/Paraprofessionals	12.3
Instruction Support Teachers	10.7	Instruction Support Teachers	10.5
Special Education Teachers	8.3	Special Education Teacher	5.3
Reading/Literacy Coach	4.8	Reading/Literacy Coach	5.3
Mentors/Volunteers	1.2	Mentors/Volunteers	7.0
Reading Supervisor	1.2		
RTI Coordinator	1.2		
Speech Therapist	1.2		

Both groups of respondents listed commercial reading programs; the percentage of respondents who named programs are summarized in Table 3. Program responses shared by both groups are listed first, followed by responses that differ for the two groups. Respondents in districts not using RTI frequently reported using computer programs without providing a name for the program; consequently, those responses were not identified in the table. Additionally, respondents in districts not using RTI frequently noted extended learning opportunities including before and after school programs and summer programs. Responses also included information about where or how extra support is provided to struggling students in their buildings. Frequent responses for both groups include interventions, tutoring, small groups, and special education. Although both groups listed a variety of commercial programs used in their buildings to help struggling readers, those in districts using RTI listed a greater variety of programs and the number of programs listed per respondent tended to be higher; they also listed some evidence-based programs not listed by those in non-RTI schools. Responses identifying personnel available to help students who struggle with reading were similar for respondents in districts using RTI and those not using RTI.

As summarized in table 4, about one-half of the respondents indicated that they were "a little familiar" or "somewhat familiar" with RTI (47.6% RTI; 50.8% non RTI). At upper and lower levels of familiarity, there was a greater difference between groups, with a third of non RTI respondents (33.3%) indicating that they were "not at all familiar," but only 6.0% of those in RTI districts chose that response. About one-third of RTI respondents (31.0%) indicated that they were "familiar," but 12.3% in non-RTI

Table 4

Familiarity with RTI

Level of Familiarity	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Not at all familiar	5	6.0	19	33.3
A little familiar	18	21.4	16	28.1
Somewhat familiar	22	26.2	13	22.8
Familiar	26	31.0	7	12.3
Very familiar	13	15.5	2	3.5

districts did so. There were relatively few respondents who indicated that they were "very familiar" with RTI (15.5% RTI; 3.5% non RTI). Teachers in districts using RTI rated their familiarity with the RTI model ($M = 3.29$, $SD = 1.45$) higher than teachers in districts not using RTI ($M = 2.25$, $SD = 1.15$). When the ratings were assigned numerical values with "not at all familiar" assigned a value of 1 and "very familiar" assigned a value of 5, there was a significant difference, $t(139) = 5.27$, $p < .01$ (two-tailed).

Deciding how to help students who struggle.

When answering survey question 11, the majority of respondents in districts using RTI (89.3%) and respondents in districts not using RTI (73.3%) indicated that their buildings have a process to figure out how best to instruct students who struggle with reading; although a larger percentage of those in districts not using RTI (19.3%) than

Table 5.1

Frequency and Rating of Importance of Students' Learning Stage

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	41	48.8	31	54.4
Monthly	24	28.6	16	28.1
Quarterly	13	15.5	5	8.8
Rarely	2	2.4	2	3.5
Never	2	2.4	1	1.8
Don't Know	2	2.4	2	3.5
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	2	2.4	0	0.0
Somewhat	4	4.8	1	1.8
Fairly	17	20.2	7	12.8
Very	60	71.4	48	84.2
Don't Know	0	0.0	1	1.8

those in districts using RTI (3.6%) do not have a process to help struggling readers. A small, similar percentage of respondents using (7.1%) and not using RTI (7.0%) indicated that they "don't know" if there is a process to help struggling readers in their building.

Tables 5.1 to 5.4 summarize the frequency with which respondents' buildings implement various processes to determine the need for instructional changes and the respondents' ratings of the importance of each of these processes in determining the need for instructional changes. This information was requested in survey questions 12 and 13.

As summarized in Table 5.1, most respondents, both in schools using (71.4%) and not using RTI (84.2%), noted that the student's stage in the learning process is "very important" and that they assess this regularly. It is assessed "weekly" by nearly one-half (48.8% RTI; 54.4% non RTI) and over one-quarter assess it "monthly" (28.6% RTI; 28.1% non RTI). Most respondents indicated that assessing a student's stage of learning is "very important" (71.4% RTI; 84.2% non RTI) or "fairly important" (20.2% RTI; 12.8% non RTI). However, no respondents who are not using RTI rated the importance of assessing student stage of learning as either "not at all important" or "not very important"; however, 3.6% those in buildings using RTI did.

When asked about how frequently they collect information on changes in student skills and changing instruction, most respondents indicated they assess this regularly, as summarized in Table 5,2. It is assessed "weekly" by nearly one-half of respondents in districts using RTI (48.8%) and is assessed "monthly" by over one- quarter of them (29.8%). Over one-third of respondents indicating that their districts do not use RTI assess changes in instruction and student skills "weekly" (36.8%) and over one-third do

so "monthly" (35.1%). Respondents both in districts using RTI (77.4%) and those not using RTI

Table 5.2

Frequency and Rating of Importance of Information on Students' Skill Changes

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	38	45.2	21	36.8
Monthly	25	29.8	20	35.1
Quarterly	19	22.6	13	22.8
Rarely	1	1.2	1	1.8
Never	0	0.0	0	0.0
Don't Know	1	1.2	2	3.5
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	2	2.4	0	0.0
Somewhat	3	3.6	5	8.8
Fairly	13	15.5	6	10.5
Very	65	77.4	46	80.7
Don't Know	0	0.0	0	0.0

(80.7%), noted that the changes in instruction and student skills is "very important." However, although no respondents who are in districts not using RTI rated the importance of information on student skill changes as either "not at all" or "not very" important, 3.6% those in buildings using RTI did.

As summarized in Table 5.3, brainstorming is used either "weekly" or "monthly" by three-quarters of respondents in districts using RTI (75.0%) and is assessed "weekly" or "monthly" by 68.4% of respondents indicating that their districts do not use RTI. The percentage of respondent in schools using RTI (16.7%) and those not using RTI (13.0%) indicated that they "rarely" or "never" use brainstorming was similar. Approximately one-half of respondents in districts using RTI (51.2%) and over one-third of those not using RTI (38.6%), noted that brainstorming is "very important," and between one-quarter and one-third rated it as being "fairly important" (26.2% RTI; 35.1% non RTI). Whereas only 1.2% of respondents in schools using RTI indicated that they "don't know" how frequently they use brainstorming, 6.0% of those in non-RTI districts indicated that they "don't know" how important it is. "Don't know" responses were more similar for respondents not using RTI (7.0% frequency of use; 8.8% importance of use).

As summarized in Table 5.4, CBA is used either "weekly" or "monthly" by the majority of respondents in districts using RTI (81.0%) and of those indicating that their buildings do not use RTI (80.7%). No respondents indicated that they never use CBA in their district and few respondents indicate that they "rarely" (2.4% RTI; 5.3% non RTI) use or "don't know" (1.2% RTI; 3.5% non RTI) if they use CBA. Over one-half of

respondents in districts using RTI (61.9%) and those not using RTI (59.6%), noted that using CBA is "very important," and "fairly important" was the next most common

Table 5.3

Frequency and Rating of Importance of Brainstorming

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	40	47.6	21	36.8
Monthly	23	27.4	18	31.6
Quarterly	6	7.1	6	10.5
Rarely	13	15.5	6	10.5
Never	1	1.2	2	3.5
Don't Know	1	1.2	4	7.0
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	3	3.6	2	3.5
Somewhat	10	11.9	8	14.0
Fairly	22	26.2	20	35.1
Very	43	51.2	22	38.6
Don't Know	5	6.0	5	8.8

Table 5.4

Frequency and Rating of Importance of Curriculum-Based Assessments

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	47	56.0	29	50.9
Monthly	21	25.0	17	29.8
Quarterly	13	15.5	6	10.5
Rarely	2	2.4	3	5.3
Never	0	0.0	0	0.0
Don't Know	1	1.2	2	3.5
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	2	2.4	0	0.0
Somewhat	1	1.2	10	17.5
Fairly	26	31.0	13	22.8
Very	52	61.9	34	59.6
Don't Know	2	2.4	0	0.0

response (31.0% RTI; 22.8% non RTI). However, although no respondents who are not using RTI rated the importance of CBA as either "not at all important" or "not very important," 3.6% those in buildings using RTI did.

Planning for instructional change.

When asked if they determine what will be done differently or what they will do in addition to typical instruction to help students struggling with reading in their buildings, in survey question 14, most respondents, regardless of whether or not they indicated that their district uses RTI indicated they do have such a process (89.3% RTI; 91.2% non RTI). Few respondents indicated that they did not know if they developed this type of plan (3.6% RTI; 3.5% non RTI).

Tables 6.1 to 6.5 summarize the frequency with which respondents' buildings implement various processes to determine what instructional changes will be made and respondents' ratings of the importance of each of these processes in determining the need for instructional changes. This information came from responses to survey questions 15 and 16.

When asked how often they write down the plan to help a student struggling with reading and how important it is to do so, nearly three-quarters of respondents in districts using RTI (73.8 %) and over one-half (56.1%) of respondents indicating that their districts do not use RTI, indicated that they write down the plan either "almost all of the time" of "often." About one-quarter of respondents indicated that they do so "some of the time"

Table 6.1

Frequency and Rating of Importance of Writing Down the Plan

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Almost all of the time	28	33.3	18	31.6
Often	34	40.5	14	24.6
Some of the time	17	20.2	16	28.1
Rarely	4	4.8	6	10.5
Never	1	1.2	2	3.5
Don't Know	0	0.0	1	1.8
Importance	*f*	%	*f*	%
Not at all	1	1.2	1	1.8
Not very	1	1.2	2	3.5
Somewhat	13	15.5	10	17.5
Fairly	19	22.6	11	19.3
Very	49	58.3	32	56.1
Don't Know	1	1.2	1	1.8

(20.2% RTI; 28.1% non-RTI). Fewer indicated that they "rarely" or "never" write down the plan (6.0% RTI; 14.0% non RTI). Approximately one-half of respondents (58.3% RTI; 56.1% non RTI) noted that writing down the plan is very important. Over one-third of respondents (38.1% RTI; 36.8% non RTI) noted that is "fairly" or "somewhat" important. Few respondents indicated that they "don't know" how often they write down the plan (0.0% RTI; 1.8% non RTI) or how important it is to do so (1.2% RTI; 1.8% non RTI).

Table 6.2 summarizes respondents' ratings of how frequently they follow the frequency outlined in the plan to help a struggling reader and how important it is to do so. Following the frequency of the plan to help a student struggling with reading is used either "almost all of the time" or "often" by over three-quarters of respondents in buildings using RTI (76.5 %) and is assessed "almost all of the time" or "often" by about two-thirds (66.7%) of respondents indicating that their districts do not use RTI. Following the frequency of the plan "some of the time" was endorsed by 16.7% of those in districts using RTI and 24.6% of the time by those in schools not using RTI. "Rarely" or "never" was indicated by few respondents (2.4% RTI; 3.5% non RTI). Approximately three-quarters of respondents in districts using (70.2%) and not using RTI (71.9%), noted that following the frequency of the plan is very important, and approximately one-quarter (26.0% RTI; 24.6% non RTI) indicated that following the frequency of the plan is "fairly" or "somewhat important." Few respondents using RTI (2.4%) and no respondents not using RTI indicated that it was "not at all" or "not very" important. Few respondents indicated that they "don't know" how often they follow the frequency of the plan or how

important it is to do so (1.2% RTI; 3.5% non RTI), but the percentages were equal for both aspects of the question.

Table 6.2

Frequency and Rating of Importance of Following the Frequency of the Plan

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Almost all of the time	31	36.9	16	28.1
Often	34	40.5	22	38.6
Some of the time	14	16.7	14	24.6
Rarely	3	3.6	3	5.3
Never	1	1.2	0	0.0
Don't Know	1	1.2	2	3.5
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	1	1.2	0	0.0
Somewhat	4	4.8	5	8.8
Fairly	18	21.4	9	15.8
Very	59	70.2	41	71.9
Don't Know	1	1.2	2	3.5

Table 6.3 summarizes respondents' ratings of how frequently they use all parts of the plan and how important it is to use all of the parts of the plan. Using all parts of the plan to help a student struggling with reading is used either "almost all of the time" or "often" by almost three-quarters of respondents in districts using RTI (72.6 %) and is used by approximately two-thirds (64.9%) of respondents indicating that their buildings do not use RTI. No respondents indicated that they "never" follow all parts of the plan, and few indicated that they "don't know" (1.2% RTI; 1.8% non RTI). About one-quarter of respondents endorsed using all parts of the plan "some of the time" (21.4% RTI; 28.1% non RTI). Approximately one-half of respondents in districts using (53.6%) and nearly two- thirds of those not using RTI (63.2%), noted that using all parts of the plan is very important. Respondents indicating that using all parts of the plan are "fairly" or "somewhat" important included 33.3% of respondents in districts not using RTI and 42.8% of those in buildings using RTI. Few respondents indicated that it is "not at all" or "not very" important to use all parts of the plan (2.4% RTI; 1.8% non RTI) or that they "don't know" how important it is (1.2% RTI; 1.8% non RTI).

Table 6.4 summarizes responses regarding how frequently they modify the plan and how important it is to do so. Modifying the plan to help a student struggling with reading is used either "almost all of the time" or "often" by almost three-quarters of respondents in districts using RTI (70.3 %) and is used "almost all of the time" or "often" by nearly two-thirds (64.9%) of respondents indicating that their districts do not use RTI. About one-quarter of respondents indicated that they modify the plan some of the time (25.0% RTI; 24.6% non RTI), and few indicated that they "rarely" or "never" modify the plan (3.6% RTI; 5.3% non RTI) or that they "don't know" (1.2% RTI; 3.5% non RTI).

Table 6.3

Frequency and Rating of Importance of Using All Parts of the Plan

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Almost all of the time	23	27.4	13	22.8
Often	38	45.2	24	42.1
Some of the time	18	21.4	16	28.1
Rarely	3	3.6	3	5.3
Never	0	0.0	0	0.0
Don't Know	1	1.2	1	1.8
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	1	1.2	1	1.8
Somewhat	7	8.3	4	7.0
Fairly	29	34.5	15	26.3
Very	45	53.6	36	63.2
Don't Know	1	1.2	1	1.8

Table 6.4

Frequency and Rating of Importance of Modifying the Plan

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Almost all of the time	15	17.9	18	31.6
Often	44	52.4	19	33.3
Some of the time	21	25.0	14	24.6
Rarely	3	3.6	3	5.3
Never	0	0.0	0	0.0
Don't Know	1	1.2	2	3.5
No Response	0	0.0	1	1.8
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	1	1.2	0	0.0
Somewhat	3	3.6	4	7.0
Fairly	19	22.6	12	21.1
Very	59	70.2	40	70.2
Don't Know	1	1.2	1	1.8

Of respondents not using RTI, 1.8% did not respond to the frequency of modifying the plan but did respond to the importance of doing so. Approximately three-quarters of respondents in districts using and not using RTI (70.2% for both), noted that following the frequency of the plan is "very important." About one-quarter of respondents indicated that modifying the plan is "somewhat" or "fairly" important (26.2% RTI; 28.1% non RTI). No respondents in districts not using RTI indicated that modifying the plan was "not at all" or "not very" important, but 2.4% of respondents in schools using RTI did so. Additionally, few respondents indicated that they "didn't know" how important it is to modify the plan (1.2% RTI; 1.8% non RTI).

When asked to report their frequency of use and the importance of documenting changes in the plan to help a student struggling with reading, over two-thirds of respondents in districts using RTI (67.8 %) and by one-half (50.4 %) of respondents indicating that their districts do not use RTI indicated either "almost all of the time" or "often." "Some of the time" was endorsed by 19.0% of those in schools using RTI and by 35.1% of those in schools not using RTI. Of respondents who use RTI in their districts, 11.9% marked that they "rarely" or "never" document changes to the plan, and 8.8% of those who do not use RTI endorsed those frequencies. Few respondents indicated that they "don't know" (1.2% RTI; 3.5% non RTI), and 1.8% of those who do not use RTI did not respond to the question but no respondents in districts using RTI skipped this question. Approximately two-thirds of respondents in districts using RTI (65.5%) and over one-half of those not using RTI (52.6%) noted that documenting changes to the plan is "very important." "Somewhat" or "fairly" important was endorsed by 30.9% of those in buildings using RTI and 40.4% of those in districts not using RTI. Few respondents

Table 6.5

Frequency and Rating of Importance of Documenting Changes to the Plan

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Almost all of the time	16	21.4	12	21.1
Often	39	46.4	17	29.8
Some of the time	16	19.0	20	35.1
Rarely	10	11.9	3	5.3
Never	0	0.0	2	3.5
Don't Know	1	1.2	3	3.5
No Response	0	0	1	1.8
Importance	*f*	%	*f*	%
Not at all	1	1.2	1	1.8
Not very	1	1.2	1	1.8
Somewhat	6	9.5	7	12.3
Fairly	18	21.4	16	28.1
Very	55	65.5	30	52.6
Don't Know	1	1.2	2	3.5

indicated that it is "not at all" or "not very" important (2.4% RTI; 3.6% non RTI) or that they "don't know" (1.2% RTI; 3.5% non RTI).

Making decisions about student progress.

Tables 7.1 to 7.7 summarize the frequency with which respondents' districts use various processes to make decisions about regarding student progress and respondents' ratings of the importance of each of these processes in making decisions regarding student progress. This information came from responses to survey questions 17 and 18. Table 7.1 summarizes respondents' use of and the perceived importance of assessing school-wide reading benchmarks. Over three-quarters of respondents in districts using RTI (84.5%) and nearly three-quarters of those not using RTI (71.1%), indicated that they assess benchmarks either "monthly" or "quarterly." Fewer respondents indicated that they use school wide benchmarks "weekly" (8.3% RTI; 14.0% non RTI), "rarely" or "never" (4.8% RTI; 8.8% non RTI), or "don't know" (2.4% RTI; 5.3% non RTI). Approximately two-thirds of respondents in districts using (64.3%) and over one-half of those not using RTI (57.9%), noted that class wide assessment of benchmarks is "very important" in making decisions about student progress. Approximately one-quarter of respondents in districts using RTI (27.3%) and one-third of those in schools not using RTI (33.4%) indicated that assessing student benchmarks school wide is "somewhat" or "fairly" important. Few responded indicated that is "not at all" or "not very" important (6.0% RTI; 3.5% non RTI) or that they "don't know" how important it is (2.4% RTI, 5.3% non RTI).

Table 7.1

Frequency and Rating of Importance of Assessing Student Benchmarks School Wide

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	7	8.3	8	14.0
Monthly	19	22.6	12	21.1
Quarterly	52	61.9	29	50.9
Rarely	4	4.8	4	7.0
Never	0	0.0	1	1.8
Don't Know	2	2.4	3	5.3
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	4	4.8	2	3.5
Somewhat	7	8.3	3	5.3
Fairly	16	19.0	16	28.1
Very	54	64.3	33	57.9
Don't Know	2	2.4	3	5.3

Table 7.2 summarizes responses regarding the use of and the importance of using classroom level progress monitoring for students who struggle in reading. Over three-quarters of respondents in districts using RTI (86.9 %) and those not using RTI (82.5%), indicated that they use classroom level progress monitoring "weekly" or "monthly." "Quarterly" was marked by 9.5% of those who use RTI in their district and by 3.5% of those who do not use RTI. Few respondents indicated that they "rarely" or "never" use (2.4% RTI; 3.5% non RTI) or "don't know" (1.2% RTI; 3.5% non RTI) how often they use classroom level progress monitoring for struggling readers. Approximately three-quarters of respondents in schools using (77.4%) and two-thirds of those not using RTI (66.4%), noted that classroom level progress monitoring is "very important" in making decisions about student progress. "Somewhat" or "fairly" important was endorsed by 17.8% of those using RTI and 26.4% of those not using RTI. Few respondents indicated that using classroom level progress monitoring with struggling readers is "not at all" or "not very" important (3.6% RTI; 0.0% non RTI) or that they "don't know" how important it is (1.2% RTI; 5.3% non RTI).

Respondents' ratings of use of and the perceived importance of pull-out groups by someone other than the respondent are summarized in Table 7.3. Over three-quarters of respondents in districts using RTI (78.5 %) and those not using RTI (75.4%) indicated that pull-out groups by someone else are used "weekly" or "monthly." No respondents not using RTI endorsed "quarterly," but 7.1% of those not use RTI in their district did. Of respondents using RTI, 7.2% indicated that they "rarely" or "never" use pull-out groups, but 17.5% of those in districts not using RTI did so. Few respondents indicated that they "don't know" how often they use pull-out groups (7.1% RTI; 7.0% non RTI).

Table 7.2

Frequency and Rating of Importance of Classroom Level Progress Monitoring for Struggling Students

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	43	51.2	27	47.4
Monthly	30	35.7	20	35.1
Quarterly	8	9.5	6	10.5
Rarely	2	2.4	0	0.0
Never	0	0.0	2	3.5
Don't Know	1	1.2	2	3.5
Importance	*f*	%	*f*	%
Not at all	1	1.2	0	0.0
Not very	2	2.4	0	0.0
Somewhat	6	7.1	3	5.3
Fairly	9	10.7	12	21.1
Very	65	77.4	39	66.4
Don't Know	1	1.2	3	5.3

Table 7.3

Frequency and Rating of Importance of Pull-Out Groups

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	58	69.0	41	71.9
Monthly	8	9.5	2	3.5
Quarterly	6	7.1	0	0.0
Rarely	5	6.0	4	7.0
Never	1	1.2	6	10.5
Don't Know	6	7.1	4	7.0
Importance	*f*	%	*f*	%
Not at all	1	1.2	1	1.8
Not very	4	4.8	3	5.3
Somewhat	8	9.5	6	10.5
Fairly	15	17.9	10	17.5
Very	52	61.9	31	54.4
Don't Know	4	4.8	6	10.5

Approximately two- thirds of respondents in schools using (61.9%) and over one-half of those not using RTI (54.4%), noted that pull-out groups led by someone else is "very important" in making decisions about student progress. "Somewhat" or "fairly" important was endorsed by over one-quarter of respondents (27.4% RTI; 28.0% non RTI). Few respondents indicated that using pull-out groups led by someone else is "not at all" or "not very" important (6.0% RTI; 7.1% non RTI) or that they "don't know" how important it is (4.8% RTI; 10.5% non RTI).

Table 7.4 summarizes responses regarding use of and importance of providing individual support by someone other than the respondent to students who are struggling with reading. Approximately three-quarters of respondents in districts using RTI (73.8 %) and of those not using RTI (73.7%) indicated that students receive individual support by someone else either "weekly" or "monthly." "Quarterly" was endorsed by 4.8% of those in districts using RTI and none of the respondents in buildings not using RTI. "Rarely" or "never" was selected by 11.9% of those in buildings using RTI and 19.3% of those not using RTI in their buildings. Few respondents indicated that they "don't know" how frequently struggling readers receive individual support from someone other than the respondent (9.5% RTI; 7.0% non RTI). Approximately two-thirds of respondents in districts using (63.1%) and over one-half of those not using RTI (54.4%) noted that providing individual support by someone else is "very important" in making decisions about student progress. At least one-quarter of respondents indicated that providing individual support is "somewhat" or "fairly" important (25.0% RTI; 29.9% non RTI). Few respondents indicated that providing individual support to struggling readers by someone other than

Table 7.4

Frequency and Rating of Importance of Individual Support

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	51	60.7	39	68.4
Monthly	11	13.1	3	5.3
Quarterly	4	4.8	0	0.0
Rarely	8	9.5	5	8.8
Never	2	2.4	6	10.5
Don't Know	8	9.5	4	7.0
Importance	*f*	%	*f*	%
Not at all	1	1.2	1	1.8
Not very	4	4.8	3	5.3
Somewhat	9	10.7	5	8.8
Fairly	12	14.3	12	21.1
Very	53	63.1	31	54.4
Don't Know	5	6.0	5	8.8

the respondent is "not at all" or "not very" important (6.0% RTI; 7.1% non RTI) or that they "don't know" how important it is (6.0% RTI; 8.8% non RTI).

Respondents' ratings regarding use of and importance of using CBM's to make decisions about student progress is summarized in Table 7.5. Nearly one-half of respondents in districts using RTI (46.6%) and one-half of those not using RTI (50.2%) indicated that they use CBM's to make decisions about student progress either "weekly" or "monthly." "Quarterly" was endorsed by 14.3% of those in buildings using RTI and 21.1% of those in buildings not using RTI. Few respondents indicated that they "rarely" or "never" use CBM's to make decisions about student progress (7.2% RTI; 5.7% non RTI), but over one-quarter of respondents indicated that they "don't know" how frequently they use CBM's (27.4% RTI: 28.1% non RTI). Less than half of respondents in districts using (40.5%) and those not using RTI (43.9%), noted that using CBM's to make decisions about student progress is "very important." Over one-quarter of respondents indicated that using CBM's is "somewhat" or "fairly" important (29.7% RTI; 31.6% non RTI), and under one-quarter noted that they "don't know" how important it is (23.8% RTI; 21.1% non RTI). Few respondents indicated that using CBM's to monitor student progress is "not at all" or "not very" important (6.0% RTI; 3.5% non RTI).

Frequency of use and perceived importance of using graphs to make decisions about student progress is summarized in Table 7.6. Approximately one-half of respondents in districts using RTI (48.8 %) and over one-quarter of those not using RTI (28.1%) indicated that they use graphs to make decisions about student progress either "weekly" or "monthly." "Quarterly" was endorsed by over one-quarter of respondents

(27.4% RTI; 28.1% non RTI). Approximately one-quarter of respondents in districts not using RTI

Table 7.5

Frequency and Rating of Importance of Curriculum Based Measurement

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	20	23.8	13	22.8
Monthly	23	27.4	13	22.8
Quarterly	12	14.3	12	21.1
Rarely	4	4.8	0	0.0
Never	2	2.4	3	5.3
Don't Know	23	27.4	16	28.1
Importance	*f*	%	*f*	%
Not at all	0	0.0	0	0.0
Not very	5	6.0	2	3.5
Somewhat	8	9.5	7	12.3
Fairly	17	20.2	11	19.3
Very	35	40.5	25	43.9
Don't Know	20	23.8	12	21.1

(24.5%) noted that they "rarely" or "never" use graphs to make decisions about student progress, but fewer respondents using RTI in their building did so (9.5%). "Don't know" was endorsed by 14.3% of those using RTI and 19.3% of those not using RTI. Less than one-third of respondents (32.3% using RTI; 28.1% not using RTI) noted that using graphs to make decisions about student progress is "very" important. Less than one-half of those using RTI (46.5%) noted that it was "fairly" or "somewhat" important, but one-third of those not using RTI did (33.3%). Fewer respondents indicated that they think using graphs is "not at all" or "not very" important (7.2% RTI; 14.0% non RTI). Of respondents using RTI in their district, 13.1% noted that they "don't know" how important using graphs is in making decisions about student progress and 24.6% of respondents not using did so.

Table 7.7 summarizes respondent ratings of use and importance of using aimlines to make decisions about student progress. Less than one-half of respondents in districts using RTI (40.5 %) and under one-quarter of those not using RTI (20.1%) indicated that they use aimlines to make decisions about student progress either "weekly" or "monthly." "Quarterly" was indicated by 15.5% of those using RTI and 10.5% of those not using RTI. Over one-third of respondents in districts using RTI (34.5%) and almost one-half of those in schools not using RTI (45.6%) indicated that they "don't know" how frequently aimlines are used in their schools, and few of those in buildings using RTI (7.2%) and almost one-quarter of those in buildings not using RTI (22.8%) indicated that they "rarely" or "never" use aimlines to make decisions about student progress. Approximately one-third of respondents in districts using RTI (38.1%) and less than one-

quarter of those not using RTI (21.1%) noted that using graphs to make decisions about student progress is "very"

Table 7.6

Frequency and Rating of Importance of Graphs

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	8	9.5	4	7.0
Monthly	33	39.3	12	21.1
Quarterly	23	27.4	16	28.1
Rarely	6	7.1	4	7.0
Never	2	2.4	10	17.5
Don't Know	12	14.3	11	19.3
Importance	*f*	%	*f*	%
Not at all	2	2.4	2	3.5
Not very	4	4.8	6	10.5
Somewhat	13	15.5	9	15.8
Fairly	26	31.0	10	17.5
Very	28	33.3	16	28.1
Don't Know	11	13.1	14	24.6

Table 7.7

Frequency and Rating of Importance of Aimlines

Frequency	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Weekly	11	13.1	3	5.3
Monthly	23	27.4	9	15.8
Quarterly	13	15.5	6	10.5
Rarely	4	4.8	3	5.3
Never	4	2.4	10	17.5
Don't Know	29	34.5	26	45.6
Importance	*f*	%	*f*	%
Not at all	2	2.4	1	1.8
Not very	2	2.4	6	10.5
Somewhat	9	10.7	4	7.0
Fairly	11	13.1	5	8.8
Very	32	38.1	12	21.1
Don't Know	28	33.3	29	50.9

important. Approximately one-quarter of respondents using RTI (23.8%) indicated that using aimlines to make decisions about student progress is "somewhat" or "fairly" important, but fewer respondents not using RTI did so (15.8%). Fewer respondents indicated that RTI is "not at all" or "not very" important (4.8% RTI; 12.3% non RTI), and one- third of those using RTI (33.3%) and approximately one-half of those not using RTI (50.9%) noted that they "don't know" how important using aimlines is in making decisions about student progress.

Implementing and monitoring the plan.

Tables 8 through 13 summarize how respondents use components of RTI, which include determining rate of student improvement, the strength of the plan, if the plan is implemented with fidelity, who provides interventions, how it is determined if a student has an SLD, and how it is determined if student response to an intervention is adequate.

Table 8 summarizes survey question 19, which asked how respondents determine rate of student improvement. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. Most respondents in districts using (88.1%) and not using (78.9%) RTI indicated that in their buildings they use "benchmarks." Close to one-half of respondents in buildings using (41.7%) and fewer not using RTI (15.8%) indicated that they use "aimlines" to determine student progress. Few respondents (8.3% RTI; 7.0% non RTI) indicated that they use the "quantitative index." Almost one-quarter of respondents indicated that they do not use RTI (19.3%) indicated they "don't know" how rate of student improvement of student improvement is determined in their buildings, and few who use RTI (6.0%) endorsed "don't know." Few respondents endorsed "Other" (14.3% use RTI; 15.8% non RTI).

Using assessments was the most frequently cited tool under the "other" category on this question for respondents who use (12) and those who do not use RTI (5) in their buildings. Assessments listed under this category included Developmental Reading Inventories (DRA), 4Sight Testing, DIBELS, teacher/district assessments, running records, and specific skill analysis. Progress monitoring was written in by three respondents using and one respondent not using RTI. Two respondents using RTI also noted that they use observations in their buildings to determine rates of student improvement. Respondents in schools not using RTI wrote in that they use consultation (2), standards (1), anecdote (1), and rubrics (1) to determine rates of student improvement.

Table 8

How Respondents Determine Rate of Student Improvement

Tool	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Benchmarks	74	88.1	45	78.9
Aimlines	35	41.7	9	15.8
Quantitative Index	7	8.3	4	7.0
Don't Know	5	6.0	11	19.3
Other	12	14.3	9	15.8

Table 9 summarizes survey question 20, which asked how respondents determine if the plan used to help a struggling reader is strong enough. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. When asked how they determine if a plan for helping a student is strong enough, the most commonly endorsed responses were "self-checklist" (46.4% RTI; 28.1% non RTI), which is a checklist that the teacher would use about the contents of the plan and how it is implemented. "Content specialist checklist" (39.3% RTI; 29.8% non RTI) was also frequently endorsed. This choice would be a checklist used by a content specialist, most likely a reading specialist. Approximately one-quarter of respondents indicated that in their buildings they use "principal observation" (23.8% RTI; 15.8% non RTI), a checklist that the principal completes on the plan. "Don't know" (20.2% RTI; 26.2% non RTI) or "other" (19.0% RTI; 35.1% non RTI) were also endorsed approximately by one-quarter of the respondents. Few respondents endorsed "peer checklist" (8.3% RTI; 7.0% non RTI). Peer checklists were completed by other teachers observing in the classrooms.

The most frequently written response for those who chose "other" involved making a team decision to determine if the plan is strong enough to help a struggling reader (5 RTI and non RTI) and progress monitoring (3 RTI; 6 non RTI). Three respondents using and one not using RTI noted that they use observations, and one respondent using and four not using RTI indicated that they use teacher assessments to determine if the plan is strong enough to help a struggling reader. Two respondents in schools using RTI indicated that their schools do not have a plan for ways to determine if the plan developed to help a struggling reader is strong enough; one noted that she uses

pre/post assessment, and one from each group indicated that the reading specialist makes this decision.

Table 9

How Respondents Determine Strength of Plan

Tool	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Principal Observation	20	23.8	9	15.8
Self Checklist	39	46.4	16	28.1
Peer Checklist	7	8.3	4	7.0
Content Specialist Checklist	33	39.3	17	29.8
Don't Know	17	20.2	15	26.3
Other	16	19.0	20	35.1

How respondents determine if a plan is being delivered with fidelity was asked in question 21 and is summarized in Table 10. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. The most commonly endorsed responses were "self-checklist" (44.0% RTI; 36.8% non RTI) and "content specialist checklist" (40.5% RTI; 19.3% non RTI). Approximately one-quarter of respondents indicated that they "don't know" (20.2% RTI; 22.8% non RTI) what they use to measure treatment integrity. Although one-quarter of respondents in schools using RTI (25.0%) denoted use of "principal observation," fewer respondents

in schools not using RTI did so (12.3%). On the other hand, although almost one-third of respondents not using RTI (31.6%) chose "other," fewer of the respondents in schools using RTI (16.7%) did so.

Teachers in schools both using (6) and not using RTI (6) most frequently wrote in that whether or not a plan was implemented with integrity is determined via a team decision. Five of those in schools using RTI wrote in that they review the plan and/or the data to determine if the plan was implemented with fidelity, and wrote in checklists. Once again, two respondents in districts using RTI indicated that their schools do not have a plan for determining treatment integrity yet. Three respondents in schools not using RTI stated that the teacher determines if the plan was implemented with integrity; one indicated that they use Title I assessments to make the determination, and one from each group noted that a specialist determines if the plan was implemented with fidelity.

Table 10

How Respondents Determine Treatment Integrity

Tool	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Principal Observation	21	25.0	7	12.3
Self Checklist	37	44.0	21	36.8
Peer Checklist	5	6.0	2	3.5
Content Specialist Checklist	34	40.5	11	19.3
Don't Know	17	20.2	13	22.8
Other	14	16.7	18	31.6

Table 11 summarizes survey question 22, which asked who provides interventions to struggling readers in the respondents' schools. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. When asked who provides interventions to help students who struggle with reading, the most commonly endorsed responses were "specialists" (88.1% RTI; 82.5% non RTI), "regular education teacher" (77.4% RTI; 75.4% non RTI), and "special education teacher" (60.7% RTI; 63.2% non RTI), with similar response rates for respondents both in schools that use RTI and in those that do not. About one-half of the respondents also indicated that "classroom aides" provide interventions (53.6% RTI; 54.4% non RTI). Less than one-quarter of respondents indicated that "volunteers" (17.9% RTI; 21.1% non RTI), or "other" (16.7% RTI; 19.3% non RTI).

Many written responses would have fit into the choices provided, including specialist (6 RTI; 3 non RTI), classroom aide (2 RTI), regular educator (1 non RTI), and parent volunteer (1 non RTI). Other high frequency responses included IST (3 RTI; 3 non RTI) and Title I (4 RTI; 3 non RTI) staff. One respondent from each group indicated that other students provide the interventions.

Table 12 summarizes responses to survey question 23 in which they were asked to identify how it is determined whether or not a student has a Specific Learning Disability (SLD) in their buildings. The most frequent response for both those in schools using (40.5%) and not using RTI (31.6%) was "don't know." More respondents in schools not using RTI (28.1%) indicated that they use "RTI" to determine SLD; this is greater than

those respondents who indicate that they use RTI in their buildings (14.3%). Likewise, more respondents in buildings using RTI (17.9%) than those in buildings not using RTI

Table 11

Who Provides Interventions

Interventionist	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Regular Educator	65	77.4	43	75.4
Special Educator	51	60.7	36	63.2
Classroom Aide	45	53.6	31	54.4
Volunteer	15	17.9	12	21.1
Specialists	74	88.1	47	82.5
Don't know	0	0.0	1	1.6
Other	14	16.7	11	19.3

(1.8%) indicated that they use "ability-achievement discrepancy" to determine SLD. Approximately one-quarter of respondents (17.9% RTI; 29.8% non RTI) noted that they use a "combination" to determine SLD, and the remaining (14.3% using RTI; 28.1% not using RTI) chose "other."

The highest frequency of responses written in under the "other" category fell under MDE/IST process (10 RTI; 15 non RTI), which would have fit under the ability-

achievement discrepancy choice. One individual noted that individuals including classroom teachers and specialists from the IU determine if a student has and SLD. One

Table 12

How SLD is Determined

Process	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
RTI	12	14.3	16	28.1
Ability-Achievement	15	17.9	1	1.8
Combination	15	17.9	17	29.8
Don't Know	34	40.5	18	31.6
Other	12	14.3	16	28.1

other response indicated that the process has recently changed and has made it difficult for students to qualify as a student with an SLD.

Table 13 summarizes survey question 24, which asked how respondents determine if a student responds adequately to an intervention. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. When asked how adequate response to an intervention is measured, the most commonly endorsed responses were "don't know" (42.9% RTI; 52.6% non RTI) and "any rate of improvement" (31.0% RTI; 38.6% non RTI). Fewer respondents

indicated that they use "same rate of improvement as typical peers" (14.3% RTI; 5.3% non RTI) or "twice the rate of improvement as typical peers" (2.4% RTI; 0.0% non RTI). "Other" was also chosen by few respondents (16.7% RTI; 7.1% non RTI).

Responses that were written in noted aimlines (3 RTI), progress monitoring (4 RTI), goals met (5 RTI; 1 non RTI), reviewing data (1 RTI). Two respondents in schools not using RTI indicated any improvement would be adequate, which could have been checked. Two respondents using and one respondent not using RTI indicated that they do not have a method to determine student response to an intervention. Two respondents using and one not using RTI noted that they use benchmarks to determine if response to an intervention is adequate. Grade level, two percent rule, and classroom assessment were written in once by a respondent from a district using RTI.

Table 13

How Adequate Response to Intervention is Determined

Process	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Twice Rate of Improvement	2	2.4	0	0.0
Same Rate of Improvement	12	14.3	3	5.3
Any Rate of Improvement	26	31.0	22	38.6
Don't Know	36	42.9	30	52.6
Other	14	16.7	4	7.1

Training and professional development.

Tables 14 through 18 summarize respondents' perceived expertise in implementing RTI and research-based interventions, including how they received training in RTI and in research-based interventions. Additionally, places where respondents find research-based interventions is also summarized.

Table 14 summarizes responses to survey question 25, which asked respondents' perceived ability to implement RTI in their classroom. Over three-quarters of those identifying that their buildings use RTI rated their level of expertise as "emerging" or "proficient" (79.8%), but approximately one-half of those indicating that their buildings do not use RTI had the same level of ratings (47.9%). Approximately one-half of respondents in schools not using RTI (50.9%) indicated that their ability to implement RTI in their classroom is "limited to none," but only 17.9% of those using RTI had the same rating. Only 2.4% of those using RTI and none of the respondents not using RTI indicated that they were at the "expert" level. One respondent not using RTI did not respond to this question (1.8%).

How respondents were trained in RTI was asked in survey question 26 and summarized in Table 15. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. Approximately two-thirds of respondents who indicated that their buildings do not use RTI (66.7%) checked "I have not received training," but a quarter of those in buildings using RTI (25%) did so. Almost one-half of respondents in buildings using RTI (46.4%) indicated that they have received "in-service Training (speaker presenting in your district)," but less than one-quarter of those in schools not using RTI (14.0%) did so. Other types of training were

Table 14

Perceived Expertise in Implementing RTI

Perceived Expertise	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Limited to None	15	17.9	29	50.9
Emerging	46	54.8	19	33.3
Proficient	21	25.0	8	14.0
Expert	2	2.4	0	0.0
No Response	0	0.0	1	1.8

"workshop team (going out of district to attend a training with a team from your school)" (23.8% RTI; 12.3% non RTI) and "independent reading (reading books and articles on the topic)" (33.3% RTI; 17.5% non RTI). Few respondents indicated that they received "pre-service training (coursework in college while training to be a teacher)" (7.1% RTI; 5.3% non RTI) and "workshop alone (going out of district to attend a training alone)" (6.0% RTI; 7.0% non RTI).

Written in responses under the "other" category were varied. They included building-wide training by principal (2 RTI; 1 non RTI), and limited training (2 RTI). One respondent from a building using RTI wrote in each of the following: through intermediate unit (IU), by teaching a college literacy course, observing another teacher, colleagues, summer academy, graduate coursework, and as an intervention aide. One respondent in a building not using RTI wrote in each of the following: as a parent of a

child who went through the RTI process and one meeting with the special education coordinator.

Table 15

How Respondents Were Trained in RTI

Training	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
No Training	21	25.0	38	66.7
Pre-service	6	7.1	3	5.3
In-Service	39	46.4	8	14.0
Consultation	12	14.3	2	3.5
Workshop: Alone	5	6.0	4	7.0
Workshop: Team	20	23.8	7	12.3
Reading	28	33.3	10	17.5
Other	11	13.1	4	7.1

Table 16 summarizes respondents' perceived expertise with research-based interventions, which was asked in survey question 27. Respondents in buildings using (1.2%) and not using (5.3%) RTI did not respond to this question. "Emerging" was the most common response both for those in buildings using (48.8%) and not using (45.6%) RTI, but those using RTI more frequently indicated "proficiency" (29.8% RTI; 12.3% non RTI) and those not using RTI more frequently indicated "limited to none" (17.9%

RTI; 33.3% non RTI). Few from either group noted that they were "expert" in research-based interventions (1.2% RTI; 5.3% non RTI).

Table 16

Perceived Expertise with Research-Based Interventions

Perceived Expertise	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
Limited to None	15	17.9	19	33.3
Emerging	41	48.8	26	45.6
Proficient	25	29.8	7	12.3
Expert	2	2.4	2	3.5
No Response	1	1.2	3	5.3

Table 17, summarizing survey question 28, asked how respondents were trained in using research-based interventions. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. Approximately one-half of respondents who indicated that their buildings do not use RTI (45.6%) checked "I have not received training," but approximately one-quarter of those in buildings using RTI (26.2%) did so. Almost one-half of respondents in buildings using RTI (44.0%) indicated that they have received "in-service training (speaker presenting in your district)," and approximately one-quarter of those in schools not using RTI (26.3%) did so. Other types of training were "workshop: team (going out of district to attend a training with a team from your school)" (26.2% RTI; 17.5 % non RTI), "independent

reading (reading books and articles on the topic)" (42.9% RTI; 26.3% non RTI), "workshop: alone (going out of district to attend a training alone)" (20.2% RTI; 19.3% non RTI). More respondents indicated that they received "pre-service training (coursework in college while training to be a teacher)" (16.7% RTI; 14.0% non RTI) in research-based interventions than in RTI.

When providing written responses to specify how they received training in research-based interventions, graduate-level coursework was the most frequent response (6 RTI; 1 non RTI) when choosing "other." Other response varied but had the theme of informal rather than formal processes for gaining knowledge of researched-based interventions. For those in schools using RTI one respondent noted each of the following: reading recovery training, a teacher group, and through employment as an intervention aide. For those in schools not using RTI one respondent noted each of the following: colleagues, work experience, and concern with lack of knowledge.

Respondents' endorsements of where they find research-based interventions when planning an intervention for a struggling reader, is summarized in Table 18; this was asked in survey question 29. The percentage of respondents in each category will not equal 100% because respondents were directed to check all that apply. Both respondents in buildings using RTI (58.3%) and those in buildings not using RTI (64.9%) most frequently endorsed the fact that they obtain research-based interventions from their "colleagues." Both groups also frequently endorsed finding research-based interventions through a "district compiled list" (42.9% RTI; 21.1% non RTI), "workshops" (42.9% RTI; 40.4% non RTI), and "websites" (34.5% RTI; 38.6% non RTI). They were least likely to endorse finding research-based interventions from "peer reviewed journals"

(22.6% RTI; 15.8% non RTI). Few respondents indicated that they find research-based interventions through some "other" source (11.9% RTI; 12.3% non RTI).

Table 17

How Respondents Were Trained in Research-Based Interventions

Training	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
No Training	22	26.2	26	45.6
Pre-service	14	16.7	8	14.0
In-Service	37	44.0	15	26.3
Consultation	17	20.2	3	5.3
Workshop: Alone	17	20.2	11	19.3
Workshop: Team	22	26.2	10	17.5
Reading	36	42.9	15	26.3
Other	11	13.1	4	7.0

Responses of those who indicated that they obtain research-based interventions through some "other" source provided varied responses. Their responses include books (2 RTI; 1 non RTI), don't know (1 RTI; 2 non RTI), don't provide interventions (1 RTI; 1 non RTI), and in service (2 RTI). Of respondents from schools using RTI there was one response indicating the following sources: IU, colleagues, coursework, and all of the above. Of respondents from schools not using RTI there was one response indicating the

following sources: professional resources, comes with the curriculum, and concern about the lack of knowledge.

Table 18

Where Respondents Locate Research-Based Interventions

Training	RTI (n=84)		Non RTI (n=57)	
	f	%	*f*	%
District Compiled List	36	42.9	12	21.1
Workshops	36	42.9	23	40.4
Colleagues	49	58.3	37	64.9
Peer Reviewed Journals	19	22.6	9	15.8
Websites	29	34.5	22	38.6
Other	10	11.9	7	12.3

System Level Change and Perceived Effectiveness of RTI

Only respondents who indicated that they use RTI in their buildings were asked questions about RTI effectiveness, which are summarized in Tables 19-25.

Table 19 summarizes question 39, which asked respondents in districts using RTI to rate the effectiveness or ineffectiveness of RTI on numerous variables. Each rating was assigned a value with "not at all effective" assigned a value of 1, and "very effective" assigned a value of 5 in order to provide a mean rating for each area. The data are listed by descending means rather than by their order in the survey. Respondents who chose

"don't know" or who did not respond to questions were omitted in calculating a mean, resulting in a variation in sample numbers. The mean for each area, suggests that overall, raters view RTI as "somewhat effective" to "fairly effective." For the first three areas: appropriate instruction (39.4%), SLD identification (33.8%), and positive outcomes (38.0%), "very effective" was the most frequently chosen response. For the last five areas: maintain in regular education (35.7%), increase quality of instruction (33.8%), monitoring program effectiveness (32.8%), choosing interventions (35.2%), and reducing referrals (38.5%), "fairly effective" was the most frequently chosen response. The areas of SLD identification and reducing referrals had the highest number of respondents choosing "don't know" or by not responding, as seen by the lower sample size in those areas.

Table 19

Respondents' Ratings of the Effectiveness of RTI

Area	n	M	SD
Appropriate Instruction	71	3.99	1.04
Positive outcomes	71	3.97	1.06
Maintain in Regular Education	70	3.97	0.95
SLD Identification	68	3.79	1.11
Choosing interventions	71	3.72	1.11
Reducing Referrals	65	3.69	1.12
Increase quality of instruction	71	3.68	1.14
Monitoring program effectiveness	70	3.63	1.17

Table 20 represents a summary of overall ratings that respondents provided for how effective or ineffective RTI is across the categories. Each rating was assigned a numerical value ("Not at all effective" = 1; "Not very effective" = 2; "Somewhat effective" = 3; "Fairly effective" = 4; "Very effective" = 5; "Don't know" = 0). Each respondents' ratings were summed across all categories, and ranges of sum totals were assigned a numeric code (total sum of 0 = 0; total sum of 1-8 = 1; total sum of 9-16 = 2; total sum of 17-24 = 3; total sum of 25-32 = 4; total sum of 33-39 = 5; total sum of 40 =6).

Over one-half of respondents who indicated that they use RTI in their buildings had ratings of RTI that generally were a 4-5 (54.7%), which primarily includes ratings of "somewhat effective" to "very effective" across categories. Of respondents, 9.5% rated RTI as being "very effective" in every category and 8.3% indicated that they "don't know for every category.

System-level change processes in transitioning to RTI.

Tables 21 through 26 summarize the relationship between respondents' perceptions of how RTI was implemented in their buildings and their perceptions of the effectiveness of RTI. System-level change processes that were addressed include assessing readiness for change, teacher involvement in establishing RTI, providing rationale for the change, sharing the phases of change with staff, type of support provided and by whom, who initiated the RTI process, and whether or not RTI goals are included in their performance reviews.

When asked in survey question 31 how staff readiness to change was assessed before implementing RTI, respondents most frequently chose "not assessed" (37) and "don't know" (22), when asked how staff readiness to change to was assessed prior to

Table 20

Overall Rating of the Effectiveness of RTI

Effectiveness Rating	Frequency (n=84)	Percentage
0	7	8.3
1	1	1.2
2	3	3.6
3	13	15.5
4	27	32.1
5	19	22.6
6	8	9.5
No Response	6	7.1

implementing RTI in their buildings; there were respondents who chose these options in nearly every level of perceived effectiveness of RTI. Only one respondent added a response under the "other" option, noting that the district is just beginning to use RTI and that a few teachers have gone to a training session, but the response did not address how staff readiness to change was assessed. There was a trend for respondents with higher ratings for the effectiveness of RTI to provide responses across the options, but those

who indicated that RTI is less effective tended to provide a narrower range of responses. However, fewer respondents fell into the lower levels of perceived overall effectiveness, limiting the possible range of responses.

Table 21

Response Frequency for How Buildings Assessed Readiness to Change by Perceived Level of Effectiveness

Tool	0	1	2	3	4	5	6
Survey					2	3	2
Focus group						3	2
Informal discussions	1			1	7	7	3
Not assessed	3		3	11	12	5	3
Don't know	3	1	1	2	6	7	2

When asked, in survey question 32, how involved teachers were in establishing RTI in their building, respondents most frequently chose "don't know" (28) and "not sought" (26), as summarized in Table 22. Two respondents provided comments in the "other" section. One noted that teachers in kindergarten through second grade were involved in establishing RTI, and the other indicated that administrators selected a group of teachers who determined which assessment to use for RTI.

Survey question 23 asked if teachers in their buildings were provided with clear statements about the rationale for adopting RTI. As summarized in Table 23, 46.4% of respondents indicated that they were provided with the rationale; 28.6% indicated that

they did not receive that rationale; 19.0% noted that they "don't know," and 6.0% did not respond. "No" and "don't know" responses were seen across levels of perceived

Table 22

Response Frequency for How Buildings Involved Teachers in Establishing RTI by Perceived Level of Effectiveness

	0	1	2	3	4	5	6
Input sought and used					7	5	2
Input sought but not used	1			1	1		1
Input not sought			2	8	9	3	4
Don't know	6	1	1	2	7	10	1
Other				2	2	1	

effectiveness of RTI, but "yes" responses were more common among respondents whose ratings were higher for the overall effectiveness of RTI.

Table 23

Whether Respondents Were Provided with Rationale for Adopting RTI

	Perceived Level of Effectiveness						
Rationale Identified	0	1	2	3	4	5	6
Yes			2	3	15	13	6
No	4	1	1	7	6	3	2
Don't Know	3			3	6	3	8

Survey question 34 asked if the phases of change were identified and shared with staff. As summarized in Table 24, 41.7% indicated that they were; 28.6% indicated that they were not; 21.4% did not know, and 8.3% did not respond. Across levels of perceived effectiveness, there was a range of responses on this item.

Table 24

Whether Phases of Change Were Identified to Respondents

	Perceived Level of Effectiveness						
Phase Change Identified	0	1	2	3	4	5	6
Yes	1		2	3	13	12	4
No	3	1	1	6	5	4	4
Don't Know	2			4	8	3	8

Survey question 35 asked what level of support respondents received in implementing RTI, permitting respondents to indicate all of the types of support provided to assist in implementing RTI, allowing for individual respondents to choose multiple responses. As summarized in Table 25, regularly scheduled meetings with staff to review student progress and concerns with implementing RTI (31) was the most frequent response. The most infrequent response was being observed by support staff who provided feedback on implementing RTI (10). Almost all respondents who provided the lowest ratings of the effectiveness of RTI indicated that they "don't know" what types of supports are provided by their schools in implementing RTI. Additionally, respondents

whose ratings placed them in higher levels of perceived effectives of RTI were more likely to indicate that they received multiple forms of support than those in lower levels of perceived effectiveness. Ten respondents indicated that they received some "other" type of support in implementing RTI, and provided comments. Four of the comments indicated that they are just starting to use RTI, suggesting that they have not started to receive support. One noted that they have weekly meetings; two noted that they have received little to no training; one is not using RTI in the building, and has not been trained in using RTI for reading.

Table 25

Response Frequency for Level of Support in Implementing RTI by Perceived Level of Effectiveness

	Perceived Level of Effectiveness						
Support	0	1	2	3	4	5	6
Progress monitoring meetings			1	5	11	12	2
Faculty meetings			1	3	7	9	4
Observe and feedback				2	1	3	4
Phone and email				1	10	5	4
Don't know	6	1	1	3	4	3	1

Table 26 summarizes responses to survey question 36, which asked respondents to indicate all of the personnel who provide support in implementing RTI, allowing for individual respondents to choose multiple responses. The most frequently chosen

responses were "reading specialist" (44) and "principal" (35). Respondents at higher levels of perceived effectiveness indicated that they received support from multiple sources, but those who perceived the level of effectiveness of RTI to be lower were more likely to indicate fewer sources of support.

Table 26

Response Frequency for Who Provides Support in Implementing RTI by Perceived Level of Effectiveness

	Perceived Level of Effectiveness						
Personnel Providing Support	0	1	2	3	4	5	6
Principal	1			6	12	10	6
School Psychologist			1	4	5	3	3
Guidance Counselor	1			4	4	4	1
Reading Specialist		1	1	6	17	13	6
Intervention Specialist	1			1	9	6	5
Lead Teacher				2	4	4	3
Don't Know	7		1	2	1	3	

Table 27 summarizes responses to survey question 37, which asked respondents to indicate whether or not their performance reviews include goals related to RTI. Only 9.5% of respondents in districts that use RTI indicated that their performance reviews include goals related to implementing RTI; 56.0% indicated no RTI performance goals; 26.2% noted that they "don't know," and 8.3% did not respond to the question. No

respondents whose ratings of perceived levels of effectiveness of RTI were in the lower ranges indicated that they have performance goals related to RTI and the few respondents who indicated that they have performance goals related to RTI were in the upper levels of perceived effectiveness.

Table 27

Response Frequency for Inclusion of RTI Goals in Performance Reviews by Perceived Level of Effectiveness

	0	1	2	3	4	5	6
Yes				1	1	3	3
No	3	1	2	8	20	9	5
Don't Know	6		1	3	6	6	

Table 28 summarizes responses to survey question 38, which asked respondents to indicate all of the personnel who initiated the RTI process in their buildings, allowing for individual respondents to choose multiple responses. The most frequent responses were that the RTI process was initiated by the "principal" (33) or that they "don't know" (27) who initiated the process. Few respondents indicate that "teacher(s)" (5) or "school psychologist" (9) initiated the RTI process. Respondents provided five "other" responses including curriculum coordinator, assistant superintendent, special education coordinator/administrator (2), and coordinator of student services.

The last question of the survey provided respondents with the opportunity to provide additional comments about RTI and this is summarized in Table 29. Almost one-

half of respondents in schools not using RTI provided comments (47.4%), and 10.7% of those

Table 28

Who Initiated the RTI Process by Perceived Level of Effectiveness

	Perceived Level of Effectiveness						
RTI Initiator	0	1	2	3	4	5	6
Principal	2			5	13	9	4
School Psychologist			1	3	2	3	
Teacher(s)					1	3	1
Superintendent	1				5	4	6
Don't Know	6		2	5	7	6	1

in buildings using RTI did so. The negative and neutral comments of teachers who indicated that they use RTI in their districts focused primarily around how this system level change was implemented. The negative comments of those in districts not using RTI centered primarily on how the professional development aspect of system level change, namely lack of professional development, concerns about negative impacts on students, and teacher workload. Common neutral responses for those in districts not using RTI included lack of knowledge about it and statements indicating that research-based instruction modified to individual learners is already part of what they provide to students in their schools. Positive statements from respondents in non RTI districts included the importance of teacher involvement, interest in any techniques that help struggling

students, and positive aspects about how their school transitioned to using RTI, despite the fact that these respondents indicated that their districts do not use RTI.

Table 29

Respondent Comments About RTI

RTI		
Positive	Negative	Neutral
Uses resources to provide effective instruction to all students	Little to no training (2)	Uses special education background to modify forms to get more information
Staff accept after seeing student achievement	Student support cut	As effective as the professional development provided
	Not phased in	Interested in learning more (3)
	Monumental task without guidance or support	Attention needs to be paid to the change process
	As a parent, little input sought	Hope teachers are involved in implementation
		Important to train, review philosophy, and provide materials
Non RTI		
Positive	Negative	Neutral
Always interested in learning new ways to support struggling students	Will be using soon with no training (2)	Just beginning RTI and overwhelmed but seems to be working for others
Effective in supporting struggling readers	No SLD = no IEP = no protection or accommodations in middle school	Don't know what it is (4)

RTI fills the "cracks" with monitoring and differentiation	Too much testing and PM, and not enough teaching (2)	Starting to learn about RTI (2)
Second year using RTI; reviewing and modifying initial plan	Purposefully slowing down SLD identification to keep students from receiving services (2)	Looks different in different schools
Data shows student improvement	Concerned about using RTI next year with other initiatives	Already use research-based intervention for reading for the past 14 years
Looking forward to using it based on limited knowledge	Understaffed (3)	Started positive behavior support aspect of RTI
Use K-2; starting 3rd grade next year: regular meetings, careful processes, clear expectations, strong leadership in principal	No regard for teacher recommendations for student needs	Already modify instruction, use various resources and strategies, and consult colleagues
Effective if teacher available throughout the process	Role in RTI not clear	
	Cap number of students	
	Increased teacher burnout	
	RTI team (PE teacher, principal, and counselor) for two buildings is not support	
	Thrown into it – not effective	
	Too much paperwork	
	Difficult to have team support in small buildings	

Chapter 5

Discussion

Summary

This study was conducted in order to gain insight into teachers' understanding of components of RTI in districts using and in districts not using RTI, especially because IDEIA regulations (§300.309) and Pennsylvania Special Education Regulations (§14.125) allow districts in Pennsylvania to use RTI to identify students with SLD. Additionally, this study examined whether or not teacher perceptions of the effectiveness of RTI, for teachers in districts using RTI, was related to how the district implemented the change.

Although this survey was sent to a stratified, based- on- student-enrollment levels, random sample of teachers in Pennsylvania elementary schools, respondents were primarily Caucasian females working as instructional support teachers; those in districts using RTI primarily teaching in at least partially suburban schools and those in districts not using RTI primarily teaching in at least partially rural schools.

Understanding and Use of RTI

Respondents in districts using RTI reported higher levels of familiarity with the RTI model than respondents in districts not using RTI. Respondents in both groups indicated that they have a process to determine how best to instruct students who struggle with learning to read in the buildings where they work. Respondents in districts using and districts not using RTI listed a variety of commercial programs and personnel available to assist students who struggle with learning to read. The programs listed by those in districts using RTI were more varied and included some evidence-based

programs not cited by those in non RTI schools; however, responses pertaining to personnel to help struggling students was similar for both groups.

Overall, respondents from both groups use process to determine student need at similar rates. These processes included identifying the students' stages in the learning process, collecting information on students' skills and changes in student skills based upon instruction, brainstorming, and CBA. However, brainstorming is not a recommended practice in choosing interventions because of requirements for utilizing research-based interventions and the need to have the intervention related to the core curriculum (Kovaleski & Pederson, 2008). Neither group, as a whole, indicated that these processes were of little value. However, respondents in districts using RTI had higher endorsement rates for "very" when rating the importance of identifying the stage of the learning process and brainstorming.

Areas rated for frequency and importance in planning for instructional changes included writing down the plan, following the frequency of the plan, using all parts of the plan, modifying the plan, and documenting changes to the plan. Respondents in districts using RTI indicated that they wrote down the plan more often. The step of writing down the plan is an important precursor to implementing it with fidelity because it is difficult to ensure that the plan was followed when the components of the plan cannot be verified. Again, few indicated that these processes were not important, and ratings were similar for both groups of respondents.

The third component of RTI that was examined included how decisions about student progress are made in their districts. This included assessing school-wide benchmarks for students, using classroom level progress monitoring for struggling

students, using pull-out groups led by someone other than the respondent, providing individual support by someone other than the respondent, using CMB, using graphs, and using aimlines. Respondents in both groups use benchmarks, progress monitoring, pull out groups and individual support, with similar frequency and view them as important. Although they continued to have similar responses rates, many respondents in both groups "don't know" how often they use CBM or how important it is. This is a concern because CBMs are easy to administer, are quick (NCAC, n.d.; Shinn, 2008), predict academic trajectories (McMaster et al., 2002; VanDerHeyden & Jimerson, 2005); it is the only method listed in Pennsylvania's guidelines (PDE, 2008), and improves teachers' instructional decision-making (Fuchs et al., 1989). Additionally, over 80% of respondents from both groups indicated that they use classroom level progress monitoring; however, more than one-quarter indicated that they "don't know" how often they use CBM, leaving a question about how they monitor student progress.

Response rates for the use of graphs were different for the two groups with those in districts using RTI, as a group, using graphs "monthly" but respondents in districts not using RTI are more likely "never" to use graphs. Similar response patterns were seen on the question asking about the frequency of using aimlines; those using RTI were more likely than those not using RTI to use aimlines "monthly." The largest number from both groups indicated that they "don't know" how often they use aimlines. Additionally, those in schools using RTI viewed the use of aimlines as important, and those not using RTI "don't know" how important it is. It is interesting that respondents in districts using RTI affirm the importance of using aimlines but do not use them in their buildings.

The fourth component of RTI assessed was related to implementing and monitoring the plan. Both groups indicated that "benchmarks" are frequently used to determine the rate of student improvement and that few use a "quantitative index." Further, more respondents in districts using RTI indicated they use "aimlines" and more of those in districts not using RTI endorsed "don't know." However, although nearly one-half of respondents indicated that they use aimlines to determine rate of student improvement, on an earlier question, over one- third indicated that they "don't know" how frequently they use it. Pennsylvania suggests the use of graphs in conjunction with aimlines and trendlines or a quantitative index, which is calculated using the slope of progress in order to rate progress, compared with other students (PDE, 2008).

Respondents in districts using RTI were more likely than their counterparts not using RTI to use a "self-checklist" to determine if the plan for helping a student is strong enough, whereas those in districts not using RTI were more likely to indicate that they use some "other" means such as team decision. Although PA Guidelines for Identifying Students with Specific Learning Disabilities (2008) allows the use of self-checklists both for sufficiency and for fidelity, research has shown that teacher report does not measure actual behavior (Wickstrom et al., 1998). Respondents in districts using RTI are more than twice as likely to use "content specialist checklist" to determine whether or not a plan was implemented with integrity. Again, respondents not using RTI were more likely to write in a response under "other," with team decision again being an example of written- in responses.

Respondents in both groups indicated that the individuals most likely to provide intervention were "specialists," "regular educators," and "special educators."

Respondents from both groups most frequently indicated that they "don't know" how SLD is determined in their district. Interestingly, respondents in districts not using RTI more often identified "RTI" as the process used to identify SLD in their buildings than did those in districts using RTI; they were also more likely to use some "other" method, and most of those response indicated use of the multi-disciplinary team (MDT). Those in districts using RTI were more likely than those in non RTI districts to indicate they use the "Ability-Achievement" method to determine eligibility; this is the alternate to RTI. Furthermore, "Combination" (along with "Ability-Achievement) was the second most common choice for those using RTI and the most common choice for those not using RTI, which is disallowed in Pennsylvania, requiring districts to use one or the other (PDE, 2008). These results suggest a pervasive misunderstanding among teachers about how SLD eligibility is determined across both groups.

Finally, when asked how they determine whether or not rate of improvement is adequate, approximately one-half of the respondents in both groups "don't know" the rate of student improvement that is sufficient. About one-third indicate that "any rate of improvement" is adequate, which certainly would not result in a student who is significantly below expected levels of achievement ever to reach expected benchmarks. Displaying an inadequate rate of improvement is one of the two prongs for SLD eligibility, using the RTI model (not achieving commensurate with grade-level state standards is the other) in Pennsylvania.

The final component of teachers' understanding of components of RTI involves professional development. Respondents in districts using RTI perceived their levels of expertise in implementing RTI and research-based interventions primarily as "emerging,"

and those in districts not using RTI their levels of expertise to be "limited to none." However, few respondents from either group indicated that their levels of proficiency for implementing RTI or other research-based interventions were at the "expert" level.

When indicating how they were trained, respondents in districts not using RTI were more likely to receive "no training" than those in districts using RTI. There were larger percentages of those in districts using RTI than those in districts not using RTI who identified "in-service" training and independent "reading" as the way in which they were trained both in RTI and in research-based interventions. Additionally, a higher percentage chose "consultation" for the way in which they were trained in research-based interventions. Both groups were more likely to endorse the fact that they locate research-based interventions through their "colleagues"; those in RTI districts indicated that they obtain them from a "district compiled list" at higher rates than those in non RTI districts. This pattern of response is a matter of concern; effective systems-level change necessitates adequate training and support in implementing new procedures (Adelman & Taylor, 2007; Center for Mental Health in Schools, 2008; Curtis, Castillo, & Cohen, 2008), such a RTI, suggesting that many teachers have not been adequately trained to find and utilize research-based interventions or RTI. It would also be beneficial for professional development to utilize the collaborative nature of teaching when training teachers in the use of research-based interventions and RTI. Teachers frequently turn to colleagues for assistance, and adequate training can increase the benefit and quality of that collaboration.

Respondents in districts using RTI feel fairly proficient in using RTI and research-based interventions; however, they indicated that received training primarily

through in-service or independent reading is not sufficient to translate new ideas and skills effectively into meaningful changes in practice (Keller et al., 2005; Putnam & Borak, 2000). Improved professional development along with more clearly defined processes for treatment fidelity monitoring would possibly help to increase this. Those with high levels of perceived effectiveness of RTI listed multiple support methods by multiple support personnel more frequently than those with lower levels.

Respondents in districts using RTI indicate higher levels of familiarity with the model and are more likely to indicate that they have a process in place to help struggling readers than those in districts not using RTI. In the areas of determining how to help struggling readers, planning for instructional change, and monitoring student progress, overall ratings by the two groups were similar. Overall, responses by both groups were fairly similar. This similarity of responses may be due to Pennsylvania's previous use of the Instructional Support Team (IST) process, which was a predecessor to RTI; all of these components of RTI were also facets of the IST process (Kovaleski & Glew, 2006). Further, a large number of respondents in both groups were IST teachers, which may have increased the impact of IST training on the results of this study. At the same time, there were some differences between the two groups that are potentially meaningful, including the type and variety of commercial programs used to help struggling readers, writing down and documenting changes to plans to help students, the use of graphing, the level of comfort with RTI, and the provision of professional development.

Systems-Level Change and Perceived Effectiveness of RTI

Overall, respondents in districts using RTI had mean ratings of effectiveness between "somewhat effective" and "fairly effective." More respondents indicated higher

levels of overall satisfaction than lower levels of overall satisfaction. Most respondents indicated that staff readiness to change was "not assessed" or that they "don't know" if it was assessed and that staff input was either "not sought" or that they "don't know" if it was sought. Assessing staff readiness to change and seeking and integrating staff input in implementing systemic change is directly related to how well a system institutionalizes a change (Adelman & Taylor, 2007; Curtis, et al., 2008). The fact that staff readiness was not clearly assessed and staff input was not clearly sought may have contributed to the similarity in the understanding of RTI between those in districts that use and do not use RTI.

Respondents were more likely to indicate that they received a rationale for changing to an RTI model, and this was related to higher levels of overall perceived effectiveness. When asked how they are supported in implementing RTI, those with low levels of perceived effectiveness most frequently indicated that they "don't know" and those with higher levels of perceived effectiveness were more likely to indicate several methods of receiving support. Similarly, respondents who perceived RTI to be effective were likely to indicate that they received support from several different support personnel in their buildings, but those with lower ratings were more likely to indicate fewer personnel who provided support.

Overwhelmingly, respondents either do not have performance goals related to RTI or they "don't know" , but the few respondents who do have RTI performance goals had high levels of overall perceived effectiveness for RTI. Principals were the most frequently cited personnel to initiate the RTI process in schools, and only school psychologists were identified more often than teachers as initiating RTI. This is

surprising, considering the fact that RTI research primarily comes from the field of school psychology, and in the literature, it is often recommended that school psychologist play an important role in implementing RTI and evaluating the data because of their experience with understanding and interpreting data (Kovaleski & Pederson, 2008).

Implications for Practitioners

Results of this study have several implications for practicing educators, especially in the state of Pennsylvania. Although local education agencies have a choice between using RTI or using the discrepancy model, there are some requirements for SLD identification, regardless of the model, that are sometimes perceived as relating only to RTI. For example, one inclusionary factor for determining SLD eligibility is lack of adequate achievement compared with state standards (§14.125[1]). This can be assessed using tools including benchmark assessments, research-based interventions and progress monitoring, as well as state-wide, district-wide, and norm-references assessments (PDE, 2008). However, the state does not provide criteria for these levels, except that they should use state or national standards rather than local norms; each district is responsible for determining the necessary cut off in level of achievement.

Furthermore, ruling out lack of instruction is an exclusionary factor regardless of method used for identification. Pennsylvania state regulations indicate that students must receive research-based assessments (§14.125[4][i]) and assessments of academic achievement repeated at reasonable intervals and shared with parents (§14.125[4][ii]) before determining that a student has an SLD.

Districts using an RTI model to determine SLD eligibility are required to demonstrate shared ownership, indicating that all staff members are actively involved in

assessment and instruction that is aligned with state standards. The data-based decision-making framework should also be objective and public, providing guidance in making instructional modifications and interventions, as well as monitoring progress toward those goals. Consequently, staff in any position should have an understanding of the framework for implementing RTI in the district. In addition to this, teacher responses suggest that school psychologists have not been a primary impetus for implementing RTI or for supporting its use in schools. This has a potentially detrimental impact on the effectiveness of RTI implementation. School psychologists have a unique skill set encompassing the process of collecting, analyzing and interpreting data and the process of designing, implementing, monitoring, and modifying interventions.

The high number of respondents who indicated "don't know" suggests the need for districts and buildings to communicate more effectively with staff or to delineate more clearly the policies related to SLD identification regardless of whether or not they use RTI. This need was further seen in the pervasive misunderstanding about how SLD is identified across both groups. Further, this suggests the need for additional and more effective pre-service training, continuing professional development, and more effective implementation of system-level change in school systems.

Limitations

There are several limitations to this study. These limitations are related specifically to using a survey to collect information about teachers' understanding of components and of the perceived effectiveness of RTI. Although the survey was sent to a random sample of elementary school teachers, in the state of Pennsylvania, stratified by student enrollment levels, only a portion of those teachers responded, leading to a low

usable response rate of 7.1%. As a result, teachers who completed the survey, as a group, may be different from those who chose not to complete it or started the survey and chose not to complete it. For example, over one-half of the respondents indicated that they were IST teachers, even though the survey was sent to a sample of teachers in all positions in elementary schools in Pennsylvania. Specific demographic differences in respondents include the limited response rate from teachers in urban districts; it also included the fact that those who indicated that they use RTI were more likely to be in at least partially suburban districts and those who indicated that they do not use RTI were more likely to be in least partially rural districts. Further, the size of the two groups was different with the group indicating use of RTI (n=84) being larger than the group indicating that they do not use RTI (n=57).

Relative to the instrument, the wording of questions, the order of questions, and the format of the survey influence responses on self-report measures, and although factors influencing these variables were considered in the development of the instrument, they likely impacted this survey. For example, question 30 asked if the respondent's district uses RTI; it would have been helpful to clarify further, asking if they use it in their buildings, and use it for reading. Question 15 used different wording for the ratings of each component, making it more difficult to compare this to the other questions. Additionally, this instrument does not have any data on its validity and reliability, making it difficult to compare it with other measures (Kazdin, 2003).

Questions asked did not measure actual knowledge or current practice in their schools, only self-reports of these, which may or may represent what actually occurs. These differences may be due to differences of perception in how RTI is being

implemented in their buildings. Additionally, respondents may have chosen answers that they believed were socially desirable rather than those that reflected actual practice (Kazdin, 2003). Further, there is a possible disconnect between the actual practice and the language of RTI. Although teachers may actually use some aspects of RTI identified in the survey, they may not have connected those processes to the terminology of RTI.

Recommendations for Future Research

Further examination of teachers' understanding of components of RTI could be studied by determining if teachers can identify the qualifications that an intervention must meet in order to be considered research-based and if they can identify research-based interventions that they use personally or that are used in their district. Additionally, teachers who indicated that they use RTI were likely to indicate that they use a district-compiled list. Further research could examine those lists to identify how many of the interventions provided meet the criteria for research-based interventions and to determine if they are connected to the curriculum used in the district. Future research may also review permanent products from buildings, such as intervention plans and progress monitoring, to determine what is actually done compared with self-report measures about what is done in the district.

Another area for further exploration is how well administrators, including principals, superintendents, and special education coordinators; understand RTI and its implementation, understand how to implement process change effectively, and understand how to provide evidence-based professional development for staff. Administrators are frequently the initiators of new procedures and policies, and respondents indicated that they were the most likely personnel to initiate the use of RTI.

Administrators generally also choose members for district and building RTI teams; administrators are also responsible for ensuring that initiatives are carried out as intended. Additionally, further exploration of school psychologists' understanding of implementing RTI may be beneficial. Although much of the research base for RTI comes from school psychology literature, the psychologists were not likely to be named as individuals who initiated RTI or who provided support in implementing RTI. Further research could determine whether or not school psychologists' understanding of RTI impacts this; whether or not there is a difference in perception between school psychologists and teachers, or if a principal's perception of the school psychologists' role determines whether or not they are included on RTI teams. Further research could also ascertain whether there is a difference in how RTI is implemented in schools where the psychologist is highly involved in the process as opposed to those schools who implement RTI with little to no school psychologist involvement.

Respondents in districts using RTI were primarily from suburban or partially suburban districts; those not using RTI were primarily from rural or partially rural areas, and teachers from urban areas primarily did not respond. Further research could examine the challenges and strengths of districts in each of these settings to determine additional supports that they need in order to be successful. Respondents in schools using RTI were more likely to indicate training through in-service and workshop attendance as a team. Additional research could also ascertain if those districts valuing professional development are more likely to choose RTI if choosing to use RTI increases commitment to providing additional professional development.

Additional research could examine how each district determines achievement level cutoffs, integrity checks, and adequate progress. It is likely that differences in these choices impact the results seen in various schools and districts. It would also be interesting to examine the decision-making processes used to choose the ways in which they would determine each of these.

Future research might examine teacher understanding of how students develop reading skills, and their understanding of good instruction of reading; this research might then compare how well teachers in buildings using RTI and teachers in buildings not using RTI understand these concepts. Additionally, research could examine the pre-service training that teachers are receiving in the areas of research-based instruction and intervention, in progress monitoring, and in decision-making.

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Appendices

Appendix A

Invitation to Participate in Response to Intervention (RTI) Survey – for RTI and non-RTI schools

Dear Educator:

You are invited to take part in a research study examining teacher understanding and perception of components of RTI in Pennsylvania, as part of a random sample of elementary school teachers in Pennsylvania. Many schools in Pennsylvania are opting to use this as a process for identifying students with Specific Learning Disabilities (SLDs). Although you will receive no direct benefits, your participation in this research may assist in developing recommendations regarding training for staff and methodology for successful implementation of new strategies for educational intervention.

Participation in this study should require no more than 10-15 minutes.

This study is being conducted by Gabrielle Wilcox, M. S., NCSP, a doctoral student in the School Psychology program at Philadelphia College of Osteopathic Medicine (PCOM) in Philadelphia, Pennsylvania, as part of her dissertation, under the supervision of Diane L. Smallwood, Psy.D., Professor of Psychology, PCOM.

Participation in this study is voluntary; you may choose not to participate or withdraw from the study at any time without penalty. Your response will be anonymous and will only be used for research purposes.

If you have any questions about the study or your participation, please contact Gabrielle Wilcox at 717-684-0926 or at gabriellewi@pcom.edu or Diane L. Smallwood at 215-871-6564 or at dianesm@pcom.edu.

You may access this study at
http://www.surveymonkey.com/s.aspx?sm=ELkLwQiLWcOBUyAmvfUOqA_3d_3d

The time and effort of your participation is greatly appreciated. Thank you for your consideration in participating in this research.

Sincerely Yours,

Gabrielle Wilcox, M.S., NCSP
Certified School Psychologist
Doctoral Candidate
Philadelphia College of Osteopathic Medicine (PCOM)

Appendix B

1. Background Information

1. Gender

◯ Male ◯ Female

2. What is your race (Check all that apply)?

☐ White ☐ Asian

☐ African-American ☐ Native Hawaiian/Other Pacific Islander

☐ American Indian/Alaskan Native ☐ Hispanic/Latino

Other (please specify)

3. Highest Degree

◯ B.S./B.A. ◯ M.S./M.A./M.Ed. ◯ Ph.D./Psy.D./Ed.D.

4. What is your position?

◯ Regular Education Teacher ◯ Instructional Support Teacher ◯ Special Education Teacher

◯ Other (please specify)

5. How many years have you been teaching?

◯ 1-5 years ◯ 6-10 years ◯ 11-15 years ◯ 16-20 years ◯ 21+ years

6. What grade(s) do you currently teach? (Check all that apply)

☐ K ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6

7. What is your certification level?

◯ Emergency Certification ◯ Level 1 ◯ Level 2

8. What is the locale of your district? (check all that apply)

☐ Rural ☐ Suburban ☐ Urban

2. Use of RTI

9. What resources do you have available in your building to help students who struggle with reading?

10. How familiar are you with the Response to Intervention (RTI) model?

- ◯ Not at all familiar
- ◯ A little familiar
- ◯ Somewhat familiar
- ◯ Familiar
- ◯ Very familiar

3. Deciding how to help students who struggle

11. In the building where you work, is there a process to figure out how best to instruct students who struggle with reading?

◯ Yes ◯ No ◯ I don't know

12. In your building, how often do you use each of the following in determining the need for instructional changes?

	Weekly	Monthly	Quarterly	Rarely	Never	Don't know
A. Where the student is in the learning process (e.g., gaining new knowledge, building fluency, generalizing, etc.)	◯	◯	◯	◯	◯	◯
B. Collecting information on student skills, changing instruction, and collecting information on changes in student skills	◯	◯	◯	◯	◯	◯
C. Brainstorming	◯	◯	◯	◯	◯	◯
D. Assessments based on the curriculum	◯	◯	◯	◯	◯	◯

13. How important are each of the following determining a plan for instructional changes?

	Not at all Important	Not very Important	Somewhat Important	Fairly Important	Very Important	Don't Know
A. Where the student is in the learning process (e.g., gaining new knowledge, building fluency, generalizing, etc.)	◯	◯	◯	◯	◯	◯
B. Collecting information on student skills, changing instruction, and collecting information on changes in student skills	◯	◯	◯	◯	◯	◯
C. Brainstorming	◯	◯	◯	◯	◯	◯
D. Assessments based on the curriculum	◯	◯	◯	◯	◯	◯

4. Planning for instructional changes

14. In the building where you work, do you determine what you will do differently or what you will do in addition to typical instruction to help students who struggle with reading?

◯ Yes ◯ No ◯ Don't know

15. In the building where you work, how often do you use each of the following when creating a plan for how to help a student struggling with reading?

	Almost all of the time	Often	Some of the time	Rarely	Never	Don't know
A. Writing down the plan	◯	◯	◯	◯	◯	◯
B. Following the frequency of the plan	◯	◯	◯	◯	◯	◯
C. Using all parts of the plan	◯	◯	◯	◯	◯	◯
D. Modifying the plan	◯	◯	◯	◯	◯	◯
E. Documenting changes in the plan	◯	◯	◯	◯	◯	◯

16. How important are each of the following in determining how to help a student struggling with reading?

	Not at all important	Not very important	Somewhat important	Fairly important	Very important	Don't know
A. Writing down the plan	◯	◯	◯	◯	◯	◯
B. Following the frequency of the plan	◯	◯	◯	◯	◯	◯
C. Using all parts of the plan	◯	◯	◯	◯	◯	◯
D. Modifying the plan	◯	◯	◯	◯	◯	◯
E. Documenting changes in the plan	◯	◯	◯	◯	◯	◯
F. Don't know	◯	◯	◯	◯	◯	◯

5. Making Decisions

17. In your building, how often are each of the following used to make decisions about student progress?

	Weekly	Monthly	Quarterly	Rarely	Never	Don't Know
A. Assess school wide benchmarks for students	○	○	○	○	○	○
B. Classroom level progress monitoring for students who struggle	○	○	○	○	○	○
C. Pull-out groups led by someone other than you	○	○	○	○	○	○
D. Individual support by someone other than you	○	○	○	○	○	○
E. Curriculum Based Measurement (CBM)	○	○	○	○	○	○
F. Graphs	○	○	○	○	○	○
G. Aimlines	○	○	○	○	○	○

18. In your building, how important are each of the following in making decisions about student progress?

	Not at all important	Not very important	Somewhat important	Fairly important	Very important	Don't know
A. Assess school wide benchmarks for students	○	○	○	○	○	○
B. Classroom level progress monitoring for students who struggle	○	○	○	○	○	○
C. Pull-out groups led by someone other than you	○	○	○	○	○	○
D. Individual support by someone other than you	○	○	○	○	○	○
E. Curriculum Based Measurement (CBM)	○	○	○	○	○	○
F. Graphs	○	○	○	○	○	○
G. Aimlines	○	○	○	○	○	○
F. Don't know	○	○	○	○	○	○

6. Using RTI

19. In the building where you work, how do you determine the rate of student improvement (check all that apply)?

- [ ] Benchmarks
- [ ] Aimlines
- [ ] Other (please specify)
- [ ] Quantitative Index
- [ ] Don't know

20. In the building where you work, how do you determine if a plan for helping a student is strong enough?

- [ ] Principal observation
- [ ] Self checklist
- [ ] Peer checklist
- [ ] Other (please specify)
- [ ] Content Specialist checklist
- [ ] Don't know

21. In the building where you work, how do you determine if a plan for helping a student is followed?

- [ ] Principal observation
- [ ] Self checklist
- [ ] Peer checklist
- [ ] Other (please specify)
- [ ] Content Specialist checklist
- [ ] Don't know

22. In the building where you work, who provides interventions to help students who struggle with reading? (check all that apply)

- [ ] Regular Education Teacher
- [ ] Special Education Teacher
- [ ] Classroom Aides
- [ ] Other (please specify)
- [ ] Volunteers
- [ ] Specialists
- [ ] Don't Know

23. In the building were you work, how do you decide that a student has a Specific Learning Disability (SLD)?

- ◯ Response to Intervention (RTI)
- ◯ Ability-Achievement Discrepancy
- ◯ Other (please specify)
- ◯ Combination
- ◯ Don't know

24. In the building where you work, how do you measure adequate response to an intervention? (check all that apply)

- ☐ Twice the rate of improvement of typical peers
- ☐ Same rate of improvement as typical peers
- ☐ Other (please specify)
- ☐ Any rate of improvement
- ☐ Don't know

7. Training

25. How would you rate your ability to implement an RTI in your classroom?

- ◯ Limited to none
- ◯ Emerging
- ◯ Proficient
- ◯ Expert

26. Identify how you received training in RTI (check all that apply)

- ☐ I haven't received training
- ☐ Pre-service training (coursework in college while training to be a teacher)
- ☐ In-service training (speaker presenting in your district)
- ☐ Consultation (outside expert visiting periodically and providing support)
- ☐ Other (please specify)
- ☐ Workshop alone (going out of district to attend a training alone)
- ☐ Workshop team (going out of district to attend a training with a team from your school)
- ☐ Independent reading (reading books and articles on the topic)

27. How would you rate your level of expertise with research-based interventions?

- ◯ Limited to none
- ◯ Emerging
- ◯ Proficient
- ◯ Expert

28. Identify how you received training in research-based interventions (check all that apply)

- ☐ I haven't received training
- ☐ Pre-service training (coursework in college while training to be a teacher)
- ☐ In-service training (speaker presenting in your district)
- ☐ Consultation (outside expert visiting periodically and providing support)
- ☐ Other (please specify)
- ☐ Workshop alone (going out of district to attend a training alone)
- ☐ Workshop team (going out of district to attend a training with a team from your school)
- ☐ Independent reading (reading books and articles on the topic)

29. When planning interventions, where do you find research-based interventions? (check all that apply)

- ☐ District compiled list
- ☐ Workshops
- ☐ Colleagues
- ☐ Other (please specify)
- ☐ Peer reviewed journals
- ☐ Websites

8. Use RTI

30. Does your district use an RTI model?

◯ Yes ◯ No

9 Transitioning to RTI

31. In the building where you work, how was staff readiness to change assessed before implementing RTI? (check all that apply)

- [ ] Surveys
- [ ] Focus groups
- [ ] Informal discussions
- [ ] Other (please specify)
- [ ] Staff readiness for change was not assessed
- [ ] Don't know

32. How involved were teachers in your building in establishing RTI?

- ◯ A. Teacher involvement was sought through surveys and/or focus groups, and teacher input was used in developing RTI within the building
- ◯ B. Teacher input was sought through surveys and/or focus groups, but the input was not used in developing RTI withing the building
- ◯ C. Teacher involvement was not sought in developing RTI within the building
- ◯ D. Don't know
- ◯ E. Other (please specify)

33. In the building where you work, were teachers provided with clear statements about the rationale for adopting RTI?

- ◯ Yes
- ◯ No
- ◯ Don't know

34. In the building where you work, were the phases of change to the RTI model identified and shared with staff?

- ◯ Yes
- ◯ No
- ◯ Don't know

35. What level of support do you receive in implementing RTI? (check all that apply)

- [ ] A. Regularly scheduled meetings with staff to review student progress and concerns with implementing RTI
- [ ] B. Regular faculty meetings that address issues around RTI
- [ ] C. Support staff observe classrooms and provide feedback on implementing RTI
- [ ] D. Support staff available through phone or email to answer questions and schedule meeting
- [ ] E. Don't know
- [ ] F. Other (please specify)

36. Who provides regular support in implementing RTI? (check all that apply)

- [ ] A. Principal
- [ ] B. School Psychologist
- [ ] C. Guidance Counselor
- [ ] D. Reading Specialist
- [ ] E. Intervention Specialist
- [ ] F. Lead Teacher
- [ ] G. Don't know
- [ ] H. Other (please specify)

37. Are RTI goals part of your performance review?

◯ Yes ◯ No ◯ Don't know

38. Who initiated the RTI process in your building?

- [ ] A. Principal
- [ ] B. School Psychologist
- [ ] C. Teacher(s)
- [ ] D. Superintendent
- [ ] E. Don't know
- [ ] Other (please specify)

10. Results

39. How effective or ineffective do you think RTI is in

	Not at all effective	Not very effective	Somewhat effective	Fairly effective	Very effective	Don't know
Ensuring students receive appropriate instruction	○	○	○	○	○	○
Identifying students with a specific learning disability	○	○	○	○	○	○
Increasing positive outcomes for students	○	○	○	○	○	○
Maintaining students in general education classes	○	○	○	○	○	○
Increasing the quality of instruction in general education classes	○	○	○	○	○	○
Monitoring program effectiveness	○	○	○	○	○	○
Determining which interventions to use	○	○	○	○	○	○
Reducing the number of referrals to special education	○	○	○	○	○	○

11. Final

40. Do you have any other comments about RTI?